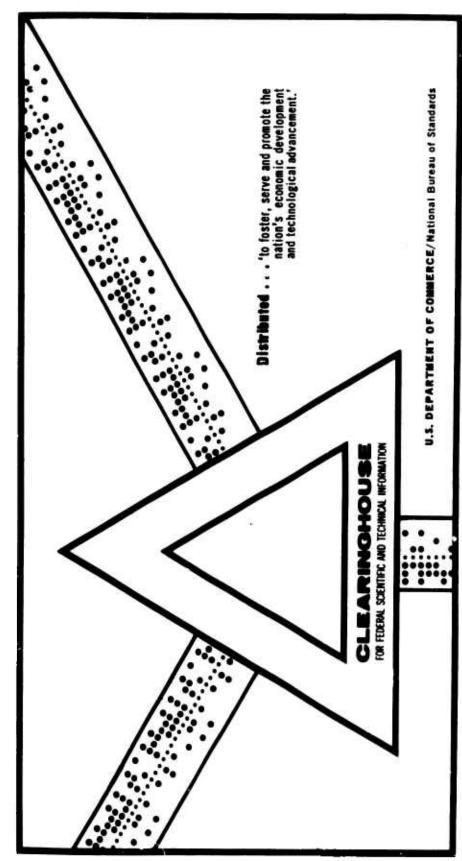
DETERMINATION OF PRINCIPAL PROPERTIES OF E FIBER-GLASS HIGH TEMPERATURE EPOXY LAMINATES FOR AIRCRAFT

S. J. Dastin, et al

Grumman Aerospace Corporation Bethpage, New York

August 1969



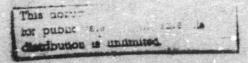
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DETERMINATION OF PRINCIPAL PROPERTIES OF "E" FIBER-GLASS HIGH TEMPERATURE EPOXY LAMINATES FOR AIRCRAFT

Final Report



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Grunman

DETERMINATION OF PRINCIPAL PROPERTIES OF "E" FIBER-GLASS HIGH TEMPERATURE EPOXY LAMINATES FOR AIRCRAFT

FINAL REPORT

August 1969

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Grumman Aerospace Corporation

Materials Engineering Department

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Under Contract DAAA21-68-C-0404

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FOREWORD

The work reported herein was performed under the sponsorship of Plastics Technical Evaluation Center - Picatinny Arsenal, Dover, New Jersey 07801 for the U.S. Army under contract DAAA21-68-C-0404. Mr. A. Slobodzinski, Picatinny Arsenal, is the U.S. Army Project Officer.

The work was performed by Grumman Aerospace Corporation, Bethpage, New York 11714. Key personnel associated with the program and their respective areas of responsibility are:

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ABSTRACT

A test program was conducted to develop mechanical strength data on ECDE 7581 glass fabric impregnated with F161 resin. This data is to be used in the new revision of MIL-HDBK-17. The properties determined were tensile, compressive and shear strengths and stiffnesses and Poisson's ratios over the temperature range of -65°F to 450°F. The results are presented in graphical, tabular, and summary forms.

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LIST OF SYMBOLS

- $\dot{\sigma}_{\mathrm{u}}$ Ultimate stress in tension, compression, or flexure.
- ϵ_u Strain at ultimate stress in tension or compression.
- E Initial modulus of elasticity (Young's modulus) in tension or compression.
- \mathbf{E}' Secondary modulus of elasticity in tension.
- T12 Shear stress in the X-Y plane of the laminate.
- τ_{13} -Shear stress in the X-Z plane of the laminate.

SECTION 1

INTRODUCTION

This document is submitted to the U.S. Army under contract DAAA21-68-C-0404 "Determination of Principal Properties of "E" Fiberglass - Epoxy Laminates For Aircraft".

The data contained herein was obtained on temperature resistant laminates, intended for continuous service up to 400°F (short time to 500°F), consisting of F161-505 epoxy-novolac resin reinforced with ECDE 7581 glass fabric (8 Harness satin using 75-1/0 yarn), also designated 7781. Mechanical properties of these laminates were measured for the range from -65°F to 450°F in the dry state, and -65°F to 220°F in the wet state.

The developed data is intended for incorporation in revised MIL-HDBK-17, Plastics for Aerospace Vehicles.

SECTION 2

PHYSICAL PROPERTIES

2.1 PREPREG MATERIAL

The physical properties of the prepreg used in this program were subdivided into three groups, each group corresponded to a different resin content. The prepreg material was manufactured by HEXCEL - COAST MANUFACTURING DIVISION (formerly Coast Manufacturing and Supply). Two sets of physical property values for the uncured prepreg are listed for comparative purposes i.e., those furnished by the supplier and those measured by Grumman Aerospace Corporation. These values are summarized in Table 2-1.

TABLE 2-1 Physical Properties of Prepreg Material

GROUP NO.	1		I	I	I	I
DATA SOURCE	HEXCEL	GRUMMAN	HEXCEL	GRUMMAN	HEXCEL	GRUMMAN
Average devolatil- ized Resin Content,	26.78	26.25	33.15	33.18	36.57	36.63
Range of Resin Content, %	24.8- 28.4	24.7- 28.1	32.55 - 34.25	32.8- 33.61	36.00 - 37.42	36.40 - 36.98
Average Volatiles,	.69	.48	•55	•53 _	•55	.56
Range of Volatiles,	•59 - •81	.47- .49	•50 - •57	•50 - •56	.51- .57	.51- .60
Average Flow, %	2.7	1.5	7.9	6.2	12.9	10.1
Range of Flow, %	2.3-3.1	.6-2.7	7.3-9.0	5.6-7.4	12.2-14.0	9.3-11.3

NOTE: - Values from 4" squares, 4 ply laminates at 325°F and 15 psi for 8 minutes as per Society of Plastics Industry (SPI) Procedures PREPREG-1 and PREPREG-2.

- All values are weight percentages.

2.2 LAMINATES

The laminated panels used for mechanical testing, were constructed as shown in Reference 1, i.e., using parallel, alternately inverted, eight (8) and ten(10) ply layups - see Section 4.

2.2.1 RESIN CONTENT DERIVED FROM PER PLY THICKNESS

The average resin content of the laminates in each group was determined as follows:

1) The average per ply thickness of the laminates in each group was obtained and 2) these values were converted to average resin content using Figure 2-1, (the data used to generate this relationship were resin content tests on actual laminates by resin pyrolysis at $1050 \pm 50^{\circ}$ F in accordance with FTMS 406 Method 7061). The results are summarized below:

TABLE 2-2 Resin Contents from Per Ply Thickness Data for Laminated Lastic Fanels

GROUP NUMBER	I	II	III
Average Resin Content*, % Range Resin Content*, %	26.0 22.2-30.0	31.0 26.0 - 35.7	35.6 26.0 - 39.8
Average Per Ply Thickness, in.	.0080	.0090	.0101
Range Per Ply Thickness, in.	.00720088	.00800100	.00800113

*NOTE: - All values are weight percentages

PER PLY THICKNESS (In)

e 2-1. Gravimetric Resin Content versus Per Ply Thickness for F161/7581 Fiberglass Epoxy

2.3

2.2.2 RESIN CONTENT DERIVED FROM SPECIFIC GRAVITY

To obtain additional information, the average resin content of the laminated plastic panels in each group was obtained in another manner as follows:

1) The average specific gravity for each group was obtained (on actual laminates by water displacement, FTMS 406 Method 5011) and 2) these values were converted to average resin content using Figure 2-2. The relationships of Figure 2-2 were established by relating specific gravity to actual resin contents by pyrolysis (FTMS 406, Method 7061). These values are listed in Table 2-3 below:

TABLE 2-3 Resin Contents from Specific Gravity Data for Laminated Panels

GROUP NUMBER	I	II	III
Average Resin Content, %	25.9	31.6	35.8
Range of Resin Content, %	22.6 - 28.5	29.7 - 32.5	32.5 - 38.0
Average Specific Gravity	2.01	1.92	1.86
Range of Specific Gravity	1.97-2.06	1.89-1.95	1.82-1.91

SPECIFIC GRAVITY

re 2-2. Gravimetric Resin Content versus Specific Gravity for F161/7581

2.2.3 VOID CONTENT

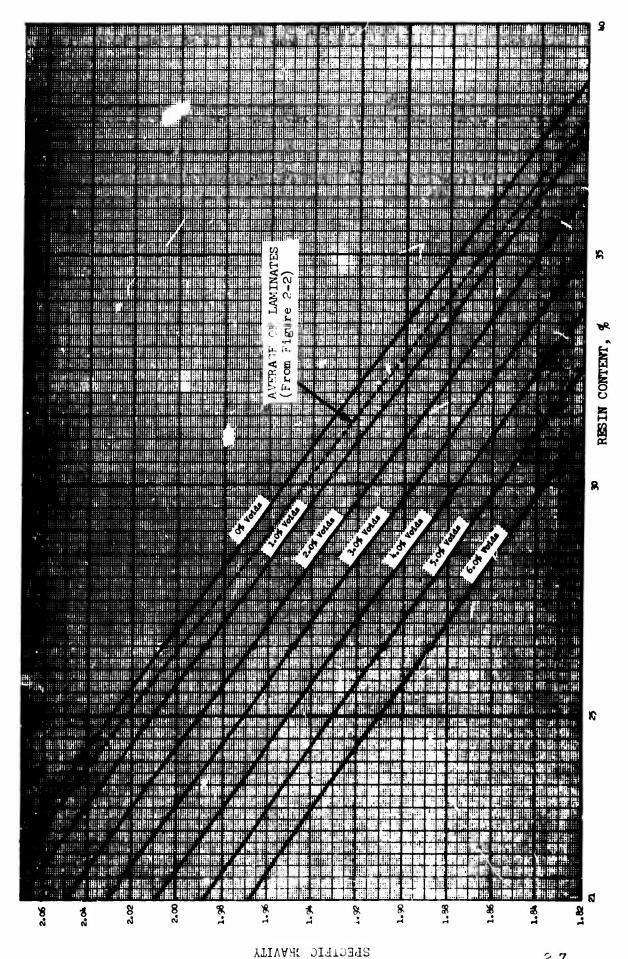
To determine void content of the laminated panels, theoretical curves of voids versus specific gravity and resin content are presented in Figure 2.3. These curves were generated as follows:

At resin contents of 26.5%, 33.75% and 36.5% (which correspond to dense data points on Figure 2.2), and assuming 7 void contents of 0 to 6 percent, the relationship between laminate resin content and specific gravity was established in accordance with the relationships specified in ASTM D-2734. These theoretical curves assumed a 7581 glass reinforcement specific gravity of 2.56. The specific gravity of the resin was obtained by taking several 1/8 inch thick, 1 inch square pure resin castings, exposing them to the same cure cycle as that of the laminates, and measuring the specific gravity by water displacement (FTMS 406 Method 5011). The specific gravity was found to be 1.260 average, with a range of 1.259 to 1.263.

To verify the accuracy of these curves, the methods specified in MIL-P-17549C (SHIPS) were used to find the void content, using measured values of resin content and specific gravity. The results are:

RESIN CONTENT (%)	SPECIFIC GRAVITY	VOID CONTENT (%)
26.50	2.00	0.4%
33.75	1.887	0.6%
36.50	1.884	0.9%

The dotted curve shown in Figure 2.3, is the plot of the actual specific gravity of the fabricated laminates used in obtaining data presented herein. All had measured void contents less than 1% by volume, which verifies the 0 and 1% void curves. Higher void content curves could not be verified under this program.



Gravimetric Resin Content versus Specific Gravity for F161/7581 Fiberglass Epoxy of Various Theoretical Void Contents. Figure 2-3.

2.7

SECTION 3

MECHANICAL PROPERTIES

3.1 GENERAL INFORMATION

The data reported in this section were generated from specially selected specimen shapes, considering the following:

TENSION SPECIMEN - An elongated, $11\frac{1}{2}$ inch long, bow-tie tensile specimen was selected for use in this program (see Figure 3-1). It provided realistic data indicated by terminal failures in the test gage section with minimum scatter. In addition, this specimen was easily fabricated and provided reproducible data. Other tensile specimen configurations which were evaluated for possible use in this program were tab ended $\frac{1}{2}$ inch wide straight sided specimens, other elongated bow-tie specimen, and ASTM D638 Type I specimens of 3, 8, and 18 inch neck down radii (see Reference 2).

COMPRESSION SPECIMEN - The standard ASTM D695 method is generally employed when compressive strength of laminated plastics is lesired. This test requires the use of a short, straight sided specimen. Typical failure modes included crushed fibers, delaminations and brooming (failure of the ends of the specimen in contact with the pressure plates). A specimen configuration that avoided these failures and enabled shear plane type fracture was selected (see Figure 3-2). The specimen and fixture provided a central unsupported area of slenderness ratio of 6.5:1 (0.1 thickness) to 8.1:1 (0.08 thickness).

PICTURE FRAME SHEAR SPECIMEN - A series of tests to evaluate the suitability of using the picture frame shear test specimen to generate data on fiberglass laminates was conducted. The specimen configuration shown in Figure 3-3 was found adequate for this program.

POISSON's RATIO SPECIMEN - By relating test data developed in compression and tensile testing a straight-sided tensile specimen was selected. An extensometer was centrally located to measure longitudinal extensions, and strain gages were centrally loaded to measure lateral contraction (See Figure 3-4).

The specimen configurations described above were used with the following test methods:

TENSION TEST METHOD - Testing was performed with grips which were self-aligning, both transversely and axially (modified Templin grips). The speed of testing (head travel) was held constant at 0.050 inch per minute. The specimen was aligned such that its longitudinal axis was parallel to the direction of load application.

COMPRESSION TEST METHOD - A jig which completely stabilized the ends of the specimen was used. The jig surfaces which contacted the specimen were Teflon faced and the ends of the specimen were clamped (sliding fit). This fixture provided an unsupported free space of 3/16 inch. Figure 3-5 shows the jig with the test specimen inserted. Compressometers were installed at the sides of the specimen. The test was conducted to fracture at a speed of 0.050 inch per minute.

<u>PICTURE FRAME SHEAR TEST METHOD</u> - The specimen was loaded at alternate corners in tension at a loading head rate of 0.050 inch per minute, with compressometers positioned to measure the lateral contraction as shown in Figure 3-3.

POISSON's RATIO TEST METHOD - Standard Templin grips were used to induce a tensile stress. Values were reported at several strains. The loading rate to a given strain was 0.05 inch per minute.

Test temperature, condition, and number of specimens is given in Table 3-1. The wet condition indicates exposure to $95 \pm 5\%$ relative humidity for 42 days at a temperature of 125°F. In addition, for wet

tests at 25°F and -65°F the samples were cycled four times between 25°F and 125°F (wet) with $\frac{1}{2}$ hour exposure at each temperature condition. The dry condition indicates that the specimens were exposed to $50 \pm 5\%$ relative humidity at 70-75°F for 14 days. The elevated temperature condition (400°F and 450°F) indicates that the specimens were exposed to 400°F and 450°F respectively for 100 hours prior to test at these elevated temperatures. All data pertaining to each test condition are recorded on the top of the appropriate table in the appendices.

TABLE 3-1 Regrouped Test Schedule and Test Environment

	NUI	MBER OF	TESTS .	FOR EAC	H PROP	ERTY
GRAVIMETRIC RESIN CONTENT, %	2	5	3	1		36
CONDITION	WET	DRY	WET	DRY	WET	DRY
TEMPERATURE °F						
450* (1), (2)	- 1	5	-	-	-	5
400 (1), (2)	-	10	-	20	-	10
220 (1), (2)	5	-	-	-	5	-
160 (2)	10	-	20	-	10	-
75 (RT)	10	-	20	-	10	-
2 5 (2)	5	-	10	-	5	-
- 65 (2)	10	20	20	10	10	.10

^{*} This temperature is 50°F in excess of the maximum temperature recommended for continuous use of this material (400°F). This test was performed to obtain additional data.

⁽¹⁾ Picture-frame shear tests were not performed at these temperatures.

⁽²⁾ Poisson's ratios were not determined at these temperature.

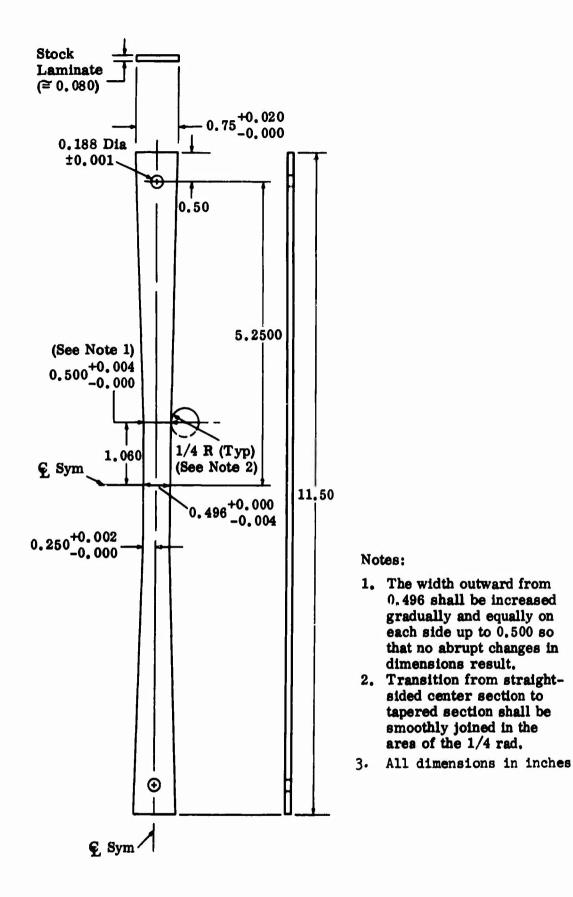
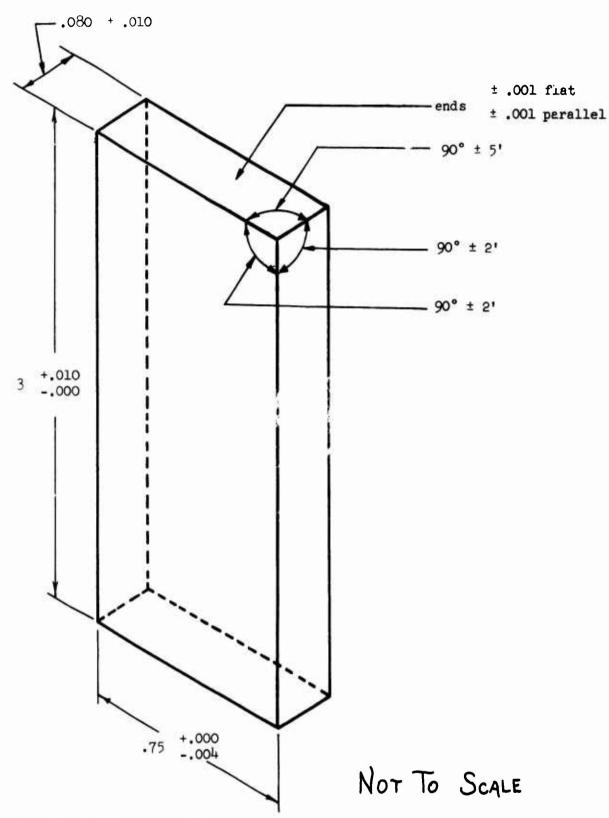
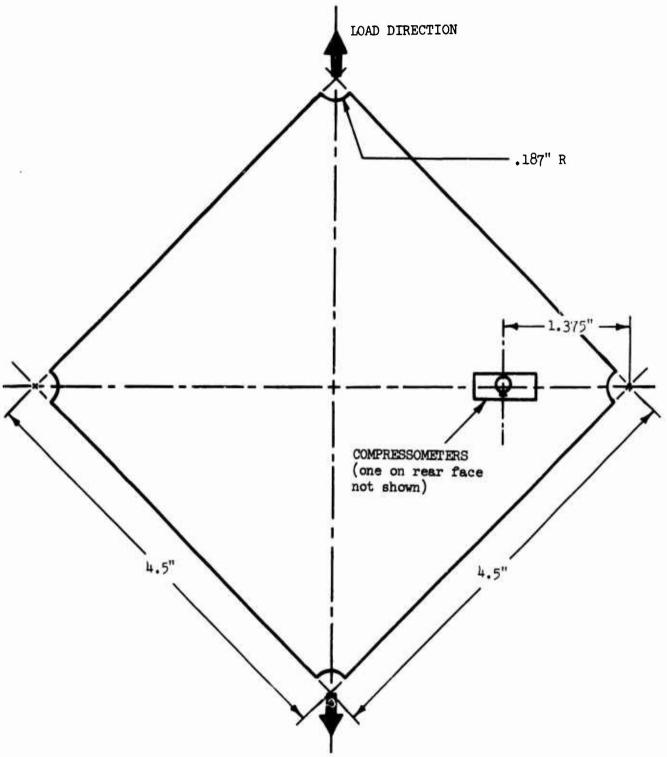


Figure 3-1. Selected Tensile Specimen



Note: All Dimensions In Inches

Figure 3-2. Selected Compression Specimen



NOTE: ONLY EXPOSED AREA INSIDE FRAME IS SHOWN.

FOR COMPLETE SPECIMEN

DESCRIPTION SEE

REFERENCE 1.

Figure 3-3 Schematic of Picture Frame Shear Specimen Showing Location of Compressometers

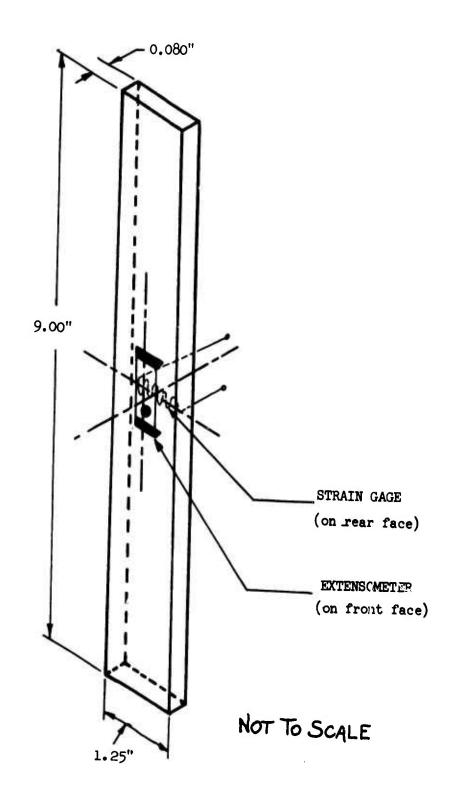


Figure 3-4. Specimen Selected to Determine Poisson's Ratio

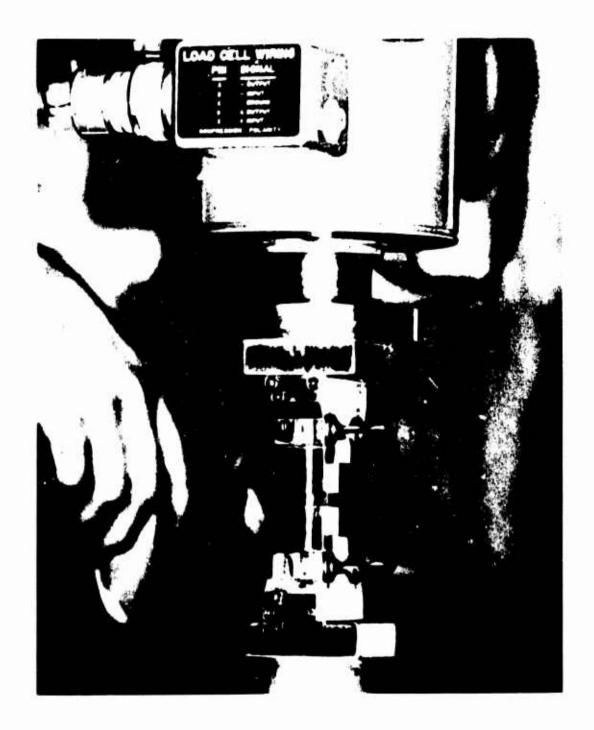


Figure 3-5. Compression Test Jig with Test Specimen Inserted

3.2 GROUP I (26.0% Resin Content) Laminates

The specific data in tabular form for laminates of this resin content are reported in Appendix I in the following manner:

Tension - Tables AI-1 to AI-18

Compression - Tables AI-19 to AI-36

Picture Frame Shear - Tables AI-37 to AI-40

Poisson's Ratio - Tables AI-41 to AI-43

3.2.1 SUMMARY DATA

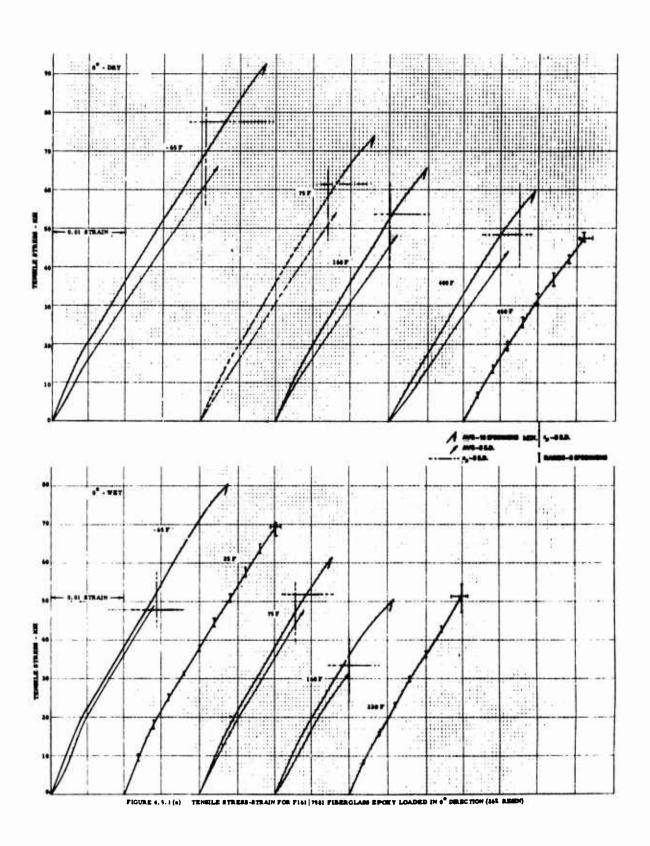
Table 3-2 summarizes the primary mechanical properties of 26% average resin content laminates. All values, except flexural strength and interlaminar shear, are from either Appendix I data or from the graphs of para. 3.3.2 (on laminates of 0.08 inch nomical thickness). The flexural strength data are from Quality Control Testing (see para. 3.5) of .125 inch nominal thickness laminates and the interlaminar shear values are from separately molded 0.250 inch thick panels tested by short span bending in accordance with ASTM D 2344.

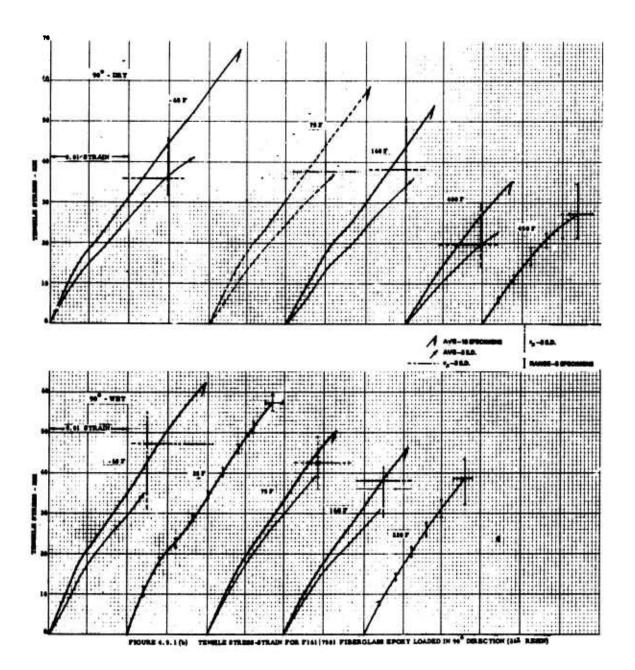
3.2.2 GRAPHICAL DATA

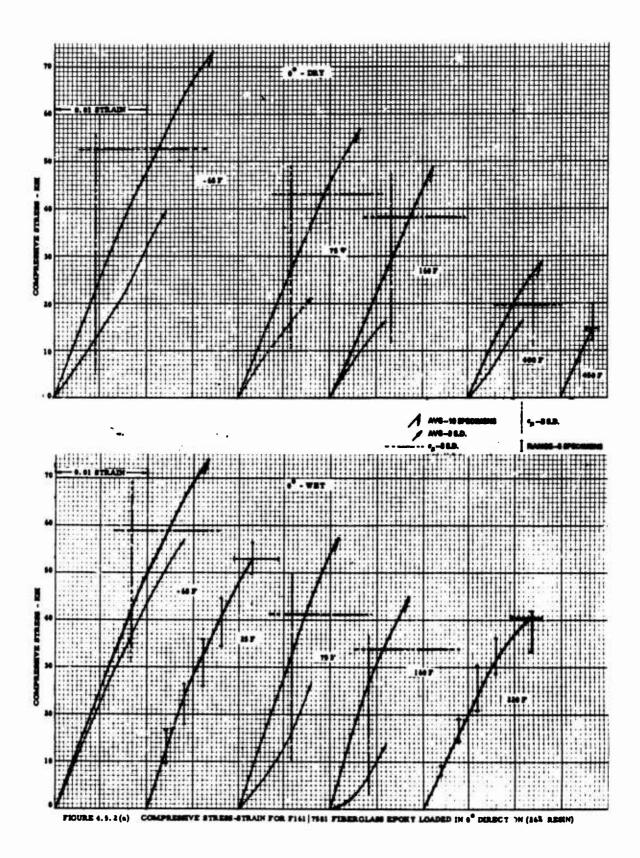
Figures, 4.5.1, 4.5.2, 4.5.3, and 4.5.4 (to be in revised MIL-HDBK-17) are graphical representations of the data given in Table 3-2 and Appendix I. Note that the arrowheads of the stress-strain curve of average minus 3 times the standard deviation (AVG. -3 S.D.) indicate the highest strain level for which stress readings for all specimens in the sample were recorded.

TABLE 3-2 SUMMARY OF MECHANICAL PROPERTIES - GROUP I LAMINATES

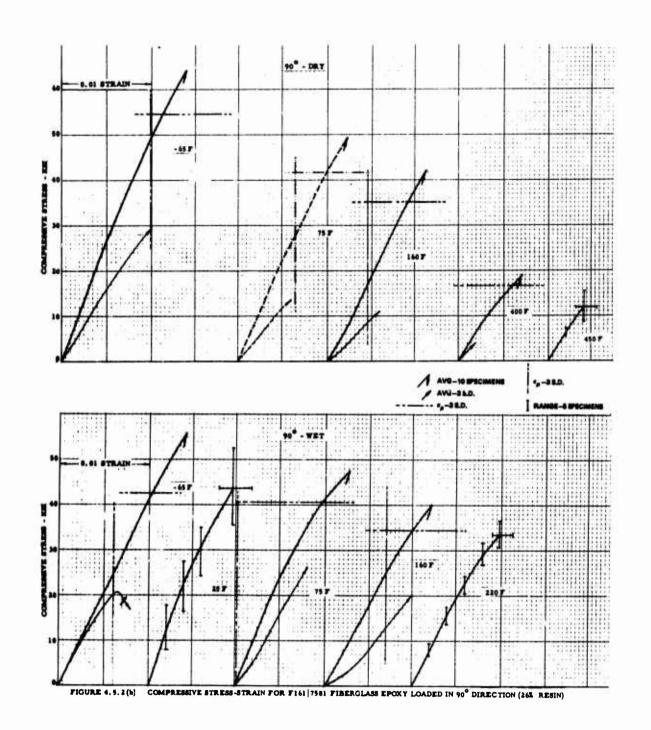
THICKNESS	PLIES	8 AND 10	0 10							INCHES) (AVER	0080 (AVERAGE PER PLY)	RPLY				
FABRICATION	BALANC	LAY UP: BALANCED, PARALLEL	RALLEL	VACUL	M:		PRESSURE: 60 ± 5	URE: 60 ± 5 PSI		BLEEDOUT: VERT.& STE	BLEEDOUT: VERT.& STEPPED EDGE) EDGE	CURE:	HR ● 360F	ų,	POSTCURE: 2 HR @ 300F	45	2.5 HR • 400F
PHYSICAL PROPERTIES	WEIG	WEIGHT PERCENT RESIN: 26.0 (AVERAGE)	PERCENT RESIN 26.0 (AVERAGE)	E (i)	SS.	2.01	SPECIFIC GRAVITY: 2.01 (AVERAGE)	\GE)		FRCEN	PERCENT VOIDS (BY VOLUME): 0.4 (APPROX)	(BY VO	LUME):	BARCOL	Ì	HARDNESS: 75 (AVERAGE	_	
TEMPER, TURE 0		4	86F		25F	u.	R	_		1605	<u>u</u>		2205	<u></u>	400	<u></u>	460F	L.
COMDITION		DRY	WET	Ţ	WET	Ţ	WET	1	DRY	_	WET	1	WET	Ţ	DRY	Ϋ́	DRY	>
	AVG	SD	AVG	os	AVG	SD	AVG	SO	AVG	SO	AVG	SD	AVG	SO	AVG	OS	AVG	છ
TENSION OL, KSI 00		5.16	80.5	10.87	69.5	_	61.4	3.20	65.7	3.03	50.7	5.72	51.3	_	59.8	3.81	47.5	,
-		10.65	62.3	5.01	57.4	1	50.3	2.61	53.6	5.19	46.2	2.69	38.8	1	36.2	5.16	27.3	ı
36 36 37 ¥ 37 ₩		211	2.37	311	2.02	-	1.78	133	1.97	<u> </u>	25.	161	1.40	1	1.96	.075	1.59	-
U)		314	1.97	244	8.	,	- 88	.075	1.88	.123	1.55	101	1.30	,	1.38	.133	1.19	1
E x 10° psi 0°	_1		8.5		4.28		4.10		3.92		3.72		3.53		3.27		3.12	
٠.	_		4.21		4.08		3.76		3.17		3.38		3.08		2.86		2.56	
E'x 10 ⁶ psi 0 ⁰	33		3.14		3.11		3.06		3.24		3.07	J	3.14		2.94		2.80	
900	2.70		2.74		2.65		2.62		2.72		2.55		2.65		2.46		2.22	
COMPRESSION G. KSI O	73.2	2979	74.0	5.02	52.9	-	57.3	¥	68	3.50	7.3	3.25	40.5	1	28.8	3.03	1.3	,
°06		3.19	56.8	4.40	43.7	1	47.5	2.28	42.0	2.64	1.04	1.90	33.6	,	18.9	0.68	11.9	ı
6 . * 00		419	1.66	112.	1.16	1	1.00	170	1.12	.153	0.84	.143	1.19	1	32.	.031	¥	,
006	1.40	.138	1.42	.273	0.97	_	1.26	.413	1.14	.231	1.22	771.	96.0	-	17.	272.	24.	ı
G KSI 00	_ [94		22		42		4		24		82		15		-	
0,			ş		17		24		36		21		18		11		-	
E x 10 ⁶ ps 0 ⁰	4.42		4.67		4.33		4.27		4.05		3.94		3.60		3.73		3.80	
06	4.02		4.19		4.31		412		3.68		3.40		3.46		3.07		2.88	
SHEAR T 12,KSI 00/900	20.1	2.3	ı	ı	ı	1	16.0	1.64	13.4	1.28	1		I	ı	-	١	ı	1
			75F .	ORY			TEST M	FEST METHODS										
TEMP CONDITION		AVG	MAX	×	Z	_	TENS	TENSION				MIL	MIL-HDBK-17	~ .				
FLEXURE OUKSI 00		94.10	98.86	22	29.62	7.	INTE	INTERLAMINAR SHEAR.	AR SHE	R		AST	MIL-HUBK-17 ASTM 02345					
INTERLAMINAR SHEAR: 13. KSI 0		5.56	5.66	10	5.50	93												

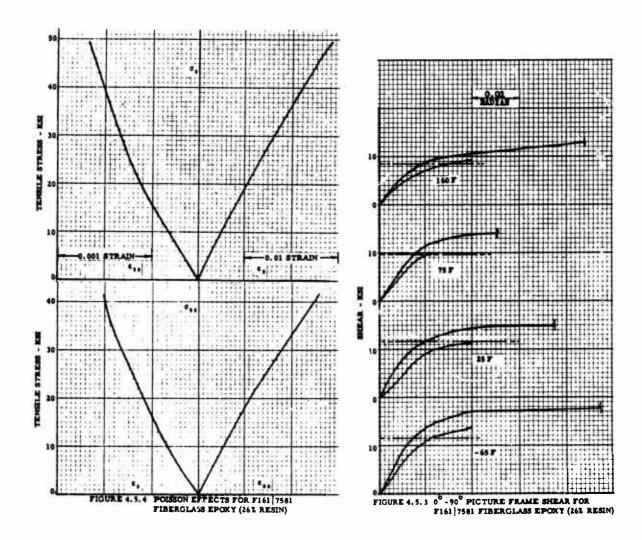






3.13





3.3 GROUP II (31.0% Resin Content) Laminates

The specific data in tabular form for laminates of this resin contents are reported in Appendix II in the following manner:

Tension - Tables AII-1 to AII-14

Compression - Tables AII-15 to AII-28

Picture Frame Shear - Tables AII-29 to AII-34

Poisson's Ratio - Tables AII-35 to AII-38

3.3.1 SUMMARY DATA

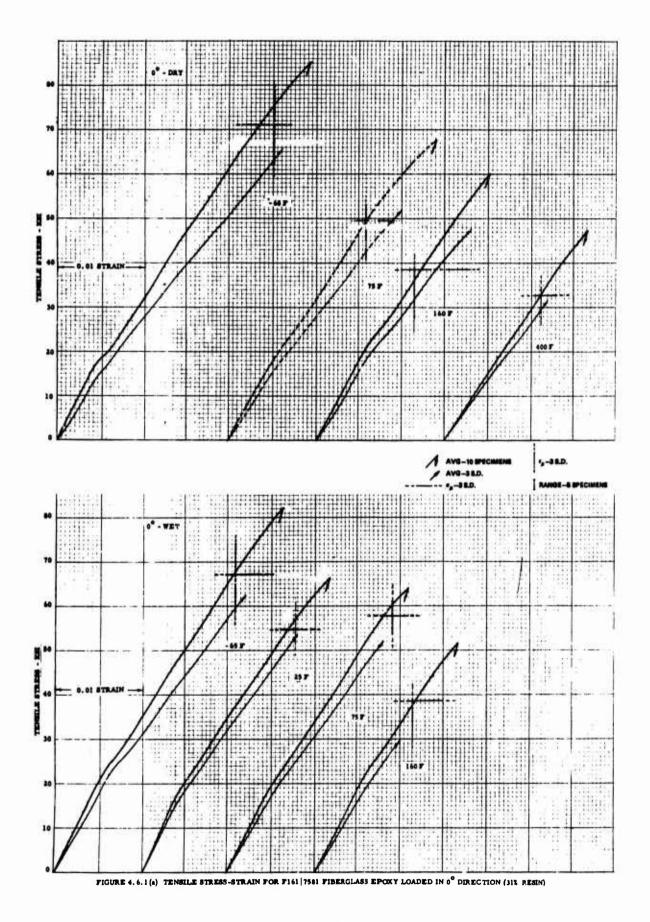
Table 3-3 summarizes the primary mechanical properties of 31% average resin content laminates. All values, except flexural strength, are from either Appendix II data or the graph of para. 3.3.2. (on laminates of 0.08 inch nominal thickness). The flexural strength data is from Quality Control Testing (see para. 3.5) of .125 inch nominal thickness laminates.

3.3.2 GRAPHICAL DATA

Figure numbers 4.6.1, 4.6.2, 4.6.3, and 4.6.4 (to be in revised MIL-HDBK-17) are graphical representations of the data given in Table 3-3 and Appendix II. Note that the arrow-heads of the stress-strain curve of average minus 3 times the standard deviation (AVG. -3 S.D.) indicate the highest strain level for which stress readings for all specimens in the sample were recorded.

TABLE 3-3 SUMMARY OF MECHANICAL PROPERTIES - GROUP II LAMINATES

THICKNESS	PLIES			80	8 AND 10					INCHES		8	0090 (AVERAGE-PER PLY)	RAGE-PI	ER PLY			
FABRICATION	LAY UP	LAY UP: BALANCED, PARALLEL	RALLEL	VACUUM	M: NONE		PRESSURE: 60 + 6	URE: 60 + 5 PSI		BLEEDOUT	BLEEDOUT: VERT.& STEPPED EDGE	_	CURE:	HR @ 350F		POSTCURE: 2 HR @ 300F	. 14	2.5 HR
PHYSICAL PROPERTIES	WEIG	WEIGHT PERCENT RESIN: 31.0 (AVERAGE)	PERCENT RESIN	E E	SPEC	SPECIFIC GRAVITY: 1.92 (AVERA	C GRAVITY: 1.92 (AVERAGE)	GE)	-	ERCENT	PERCENT VOIDS (BY VOLUME): 0.6 (APPROX)	(BY VOI	.UME):	BARC	BARCOL HARDNESS: 75 (AVERA	ARDNESS: 75 (AVERAGE)	1 _	
TEMPERATURE 0		ά	-65 F		25F	1	RT			160F	u.	Γ	220F		400¥	¥	450F	L.
CONDITION		DRY	WET	±.	WET	L	WET	1	DRY	ļ	WET	١	WET	L	DRY	<u>خ</u>	DRY	
Z	AVG	SD	AVG	SD	AVG	SD	AVG	SD	AVG	SD	AVG	SO	AVG	S	AVG	S	AVG	SD
TENSION: OU, KSI 00	LI	4.68	82.3	4.97	66.4	3.87	64.0	2.04	1.09	3.75	51.4	4.23	-	,	47.3	4.87	'	,
0)	20.0	5.24	67.9	2.98	56.3	3.45	53.5	2.91	49.3	96.0	36.8	3.50	-		31.0	1.95		ı
% in w		.139	2.53	.182	2.14	.122	2.10	190	2.02	.102	1.86	.170	ı	-	1.66	181.	ı	1
٠.	2.50	.210	2.41	.224	2.09	.102	1.90	.105	1.86	990.	1.47	280	1	1	1.25	980	,	1
E x 10 ^b psi 0 ^o	4.22		4.30		4.12		3.84		3.69		3.66		,	1	3.09		ŀ	ļ
	3.97		4.15		3.81		3.68		3.37		3.30		-	ı	2.75			1
E' × 10 ⁶ psi 0 ⁰	3.13		3.01		2.94		303		2.97		2.88			1	2.94		1	1
900	2.62		2.96		2.48		2.62		2.56		2.46		,	1	2.47			-
COMPRESSION:	73.1	5.18	0.99	10.75	50.9	10.28	4.20	7.08	90.6	3.72	46.9	5.30	,	,	828	3	,	
	58.4	3.17	57.5	11.56	45.4	90.9	-	4.73	42.2	3.34	38.7	4.19		t	25.8	8.27	,	
°0 % " >		.208	1.72	.324	1.38	.623	Н	279	1.52	20.	20.	228	1	1	96.0	536	,	
	•	285	3 .	382	1.19	7	1.10	.213	1.30	.250	0.99	122	1	1	0.87	278	,	
O KSI O			8		8		x		8		28		· •	1	91		,	
01			೫		8		8		ı		21		_	1	15		1	
E x 10 ⁰ psi 0 ⁰	3.90		Ş.		4.21		89		3.42		4.06			1	3.50		,	
06	3.56		3.84		4.03		3.96		3.23		4.01	_	1	ı	3.07		1	
SHEAR: T 12,KSI 00/900	20.5	2.23	ı	١	П	1	15.9	0.72	13.7	0.82	-	-	ł	ı	1	,	1	1
			75F	DRY										1	1		1	
I EMP - CONDITION	A	AVG	MAX	×	Min													
FLEXURE: OUKSI 00	90.23	23	93.74		87.78	ngl												



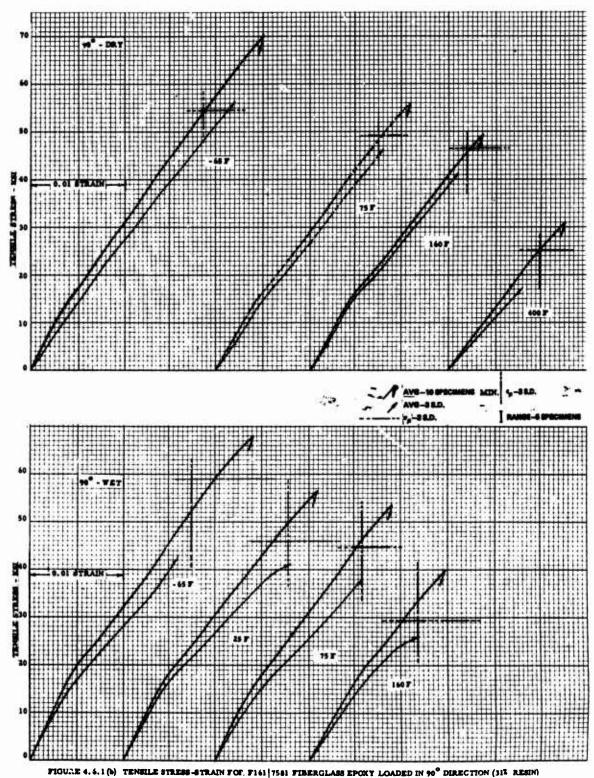


FIGURE 4.6.1(b) TENELLE STRESS-STRAIN FOR F161 7581 FIBERGLASS EPOXY LOADED IN 90° DIRECTION (31% RESIN)

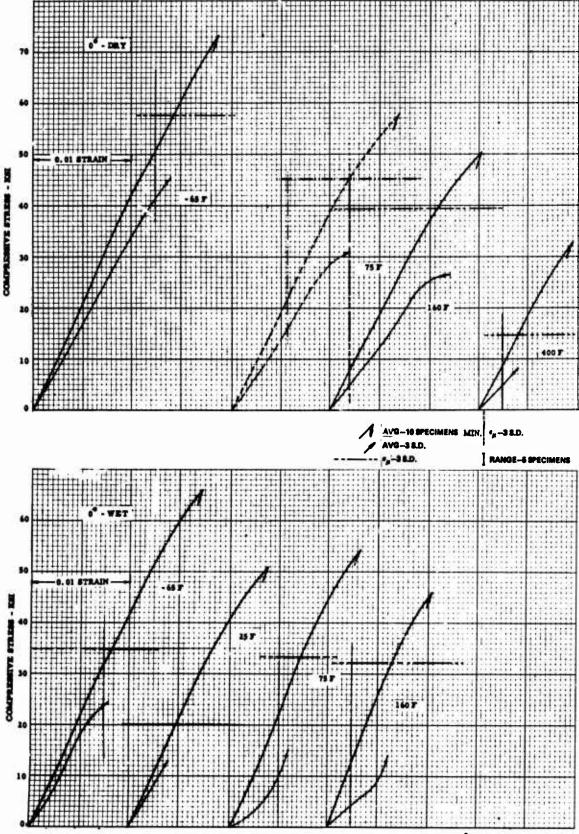


FIGURE 4.4.2(a) COMPRESSIVE STRESS. STRAIN FOR FIGURE 4.4.2 FIRESCLASS FROM VIOLADED IN 0 DIRECTION (313 BEGINS

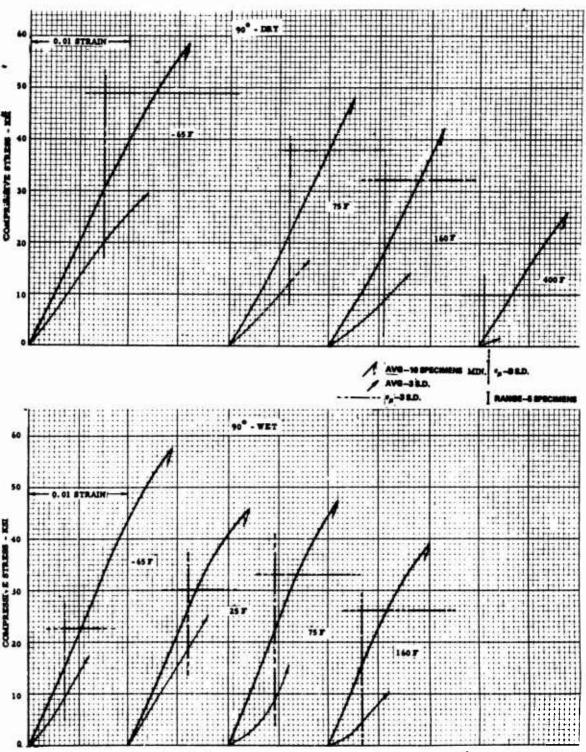
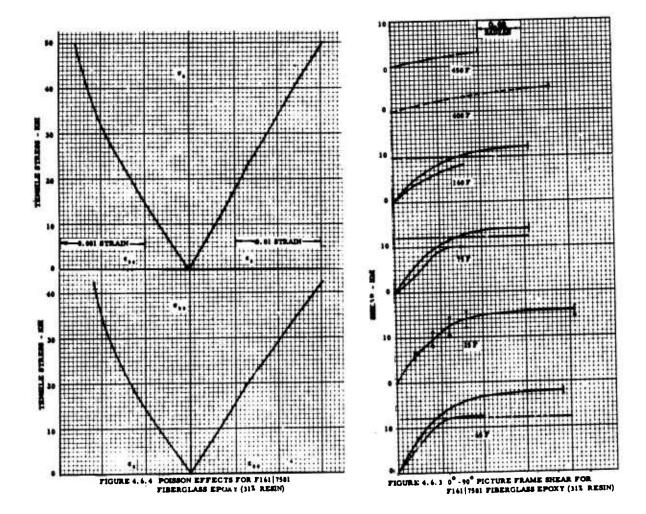


FIGURE 4.6.2 (b) COMPRESSIVE STRESS-STRAIN FOR F161/7581 FIREFGLASS EPOXY LOADED IN 90° DIRECTION (312 RESID



3.4 GROUP III (35.6% Resin Content) Laminates

The specific data in tabular form for laminates of this resin content are reported in Appendix III in the following manner:

Tension - Tables AIII-1 to AIII-18

Compression - Tables AIII-19 to AIII-36

Picture Frame Shear - Tables AIII-37 to AIII-42

Poisson's Ratio - Tables AIII-43 to AIII-44

3.4.1 SUMMARY DATA

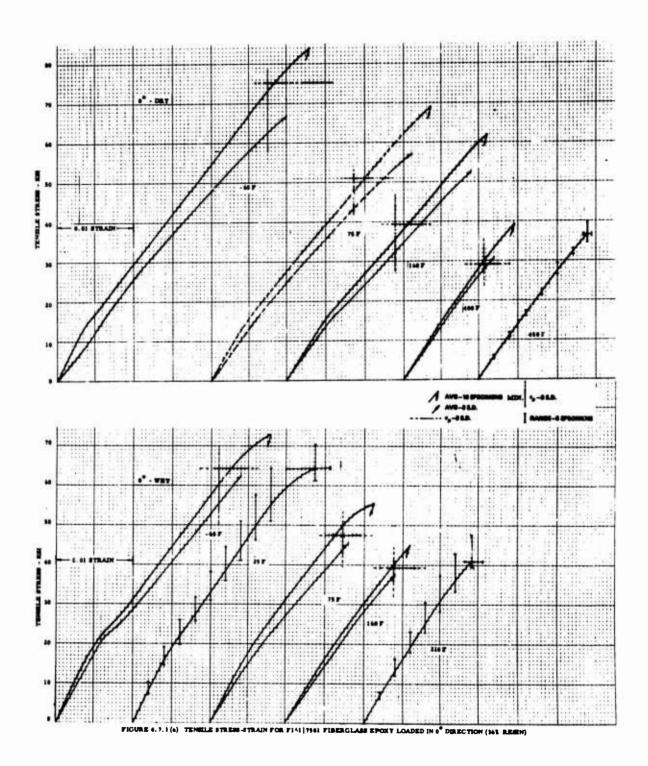
Table 3-4 summarizes the primary mechanical properties of 36% average resin content laminates. All values, except flexural strength, are from either Appendix III data or the graph of para. 3.4.2 (on laminates of 0.08 inch nomical thickness). The flexural strength data is from Quality Control Testing (see para. 3.5) of .125 inch nominal thickness laminates.

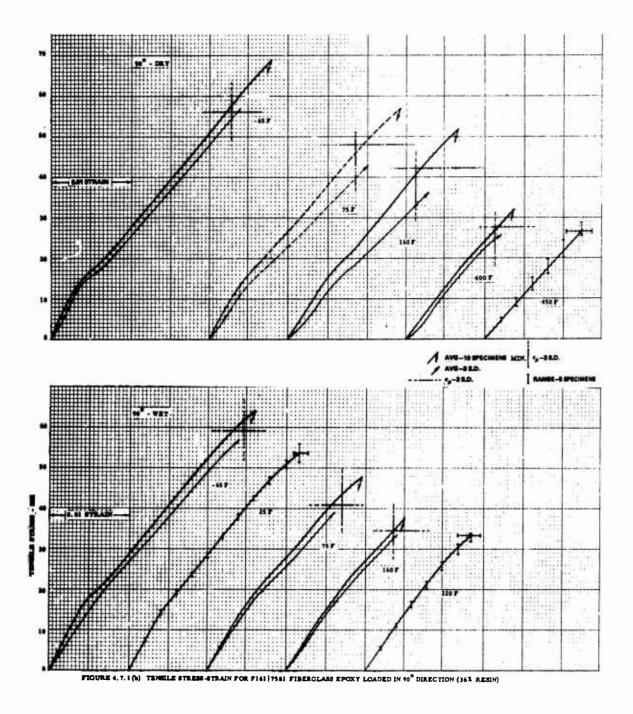
3.4.2 GRAPHICAL DATA

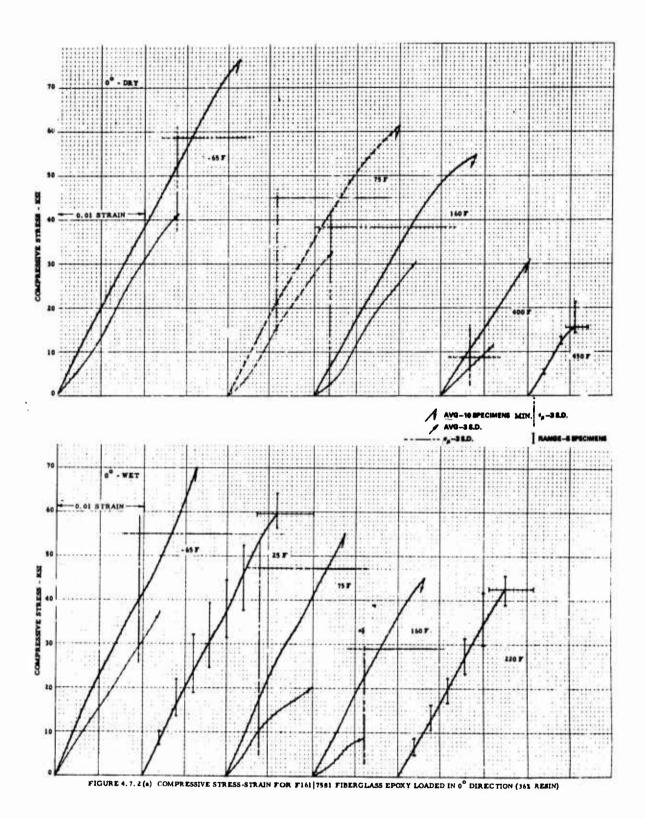
Figure numbers 4.7.1, 4.7.2, 4.7.3, and 4.7.4 (to be in revised MIL-HDBK-17) are graphical representations of the data given in Table 3-4 and Appendix III. Note that the arrow-heads of the stress-strain curve of average minus 3 times the standard deviation (AVG. -3 S.D.) indicate the highest strain level for which stress readings for all specimens in the sample were recorded.

TABLE 4 SUMMARY OF MECHA HICAL PROPERTIES - GROUP III LAMINATES

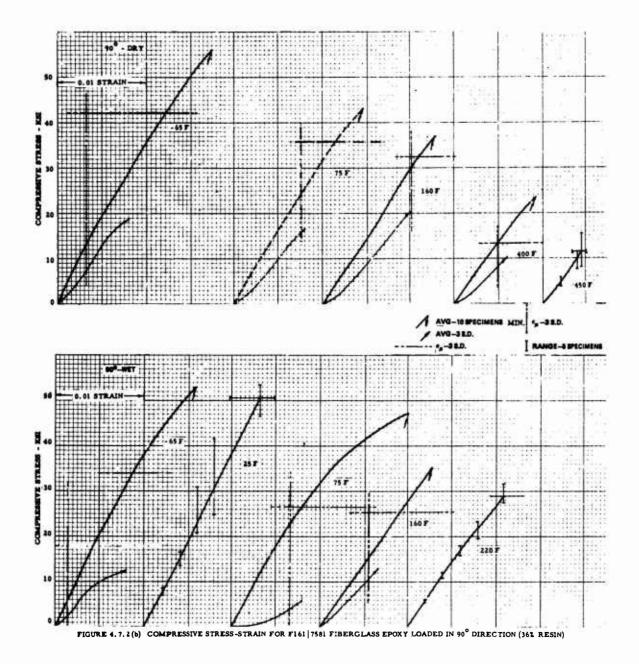
THICKNESS	PLIES:		••							INCHES		Q,	101 (AVE	0101 (AVERAGE - PER PLY)	PER PL	ζ.		
FABRICATION	BALANCI	P: ICED, PA	LAY UP: BALANCED, PARALLEL	VACUU	UM: NONE		PRESSURE: 60 + 5	JURE: 80 + 5 PSI		BLEEDOUT VERT. & STE	BLEEDOUT: VERT.& STEPPED EDGE		CURE:	HR @ 360F	,	POSTCURE: 2 HR © 300F	4	2.5 HR • 400F
PHYSICAL PROPERTIES	WEIGH	17 PERC 36.6	WEIGHT PERCENT RESIN: 36.6 (AVERAGE)	E (i)	SPE(SPECIFIC GRAVITY: 1.866 (AVER	GRAVITY: 866 (AVERAGE)	AGE)		ERCENT	PERCENT VOIDS (BY VOLUME): 0.9 (APPROX)	OIDS (BY VOL	.UME):	BARCOL	I	HARDNESS: 75 (AVERAGE)		
TEMPERATURE 0			-65F		25F		RT	-		160	ا ا		2205		\$	ų,	460	
CONDITION		DRY	WET		WET		WET		DRY	H	WET		WET	1	DRY		DRY	_
Z	AVG	SO	AVG	SO	AVG	SD	AVG	SD	AVG	os	AVG	os	V 9∧∀	S	AVG	8	AVG	8
TENSION: OL, KSI 00	8	2.86	73.0	2.80	4.4	_	5.55	2.57	6.19	2.24	46.0	1.86	40.9	_	39.2	3.40	38.7	
		4.19	gg	1.61	53.7	-	48.9	2.67	61.9	3.26	37.6	0.00	33.2	1	32.0	1.44	26.3	
:	330	181	2.79	823	2.38	_	2.12	.136	2.61	670	1.56	990.	1.42	1	1.46	128	8.	
٠.	280	.177	2.61	8	2.15	-	1.96	980.	2.18	.186	1.50	.047	1.36	t	1.36	970.	1.22	1
Ex 10° psi 0°	38		3.81		4.08		3.58		3.26		3.36		3.18		2.96		2.79	
Ų,	367		3.81		3.62		3.30		3.13		3.18		2.76		2.51		2.33	
E'x 10° pai 0°	2.81		2.76		3.00		3.04		2.40		3.04		2.82		2.74		2.61	
206	2.66		2.67		2.00		2.72		2.30		2.70		2.46		2.22		2.00	
COMPRESSION:	76.2	5.86	8.8	4.36	9.08	-	1.88	2.63	7	8	980	8	200	,	31.0	8	ž.	
		4.56	62.9	6.32	50.7	-	47.0	6.78	36.9	1.47	36.3	3.30	29.0	,	23.2	3.26	11.7	
o	_1	282	2	223	8	1	1.36	223	1.90	.575	1.32	241	1.28	1	1.02	228	0.47	
	_	9,4	28	222	-3	,	8	2	8	8	1.71	240	1.00	1	160	130	0.46	
OV. KSI O			2,		77		Z		B		8		'		17		12	
	i		7		. !		٥		8		2		13		12		,	
E x 10, 0st 0, 0	1		37.5		8 K		364	+	3.46	+	3.36		322		2.67		2.72	
	4				1	1												
SHEAR: T 12,KSI 00/900	19.6	1.04	ı	ı	1	1	15.0	0.70	12.7	29'0	1	ı	1	ı	1	1	ı	l
			75F	CRY								1		1	1			
NOI IIONO:	\	AVG	MAX	×	MIN													
FLEXURE: OF 15, KSI 00		96.31	23	92.16	79.07	,												

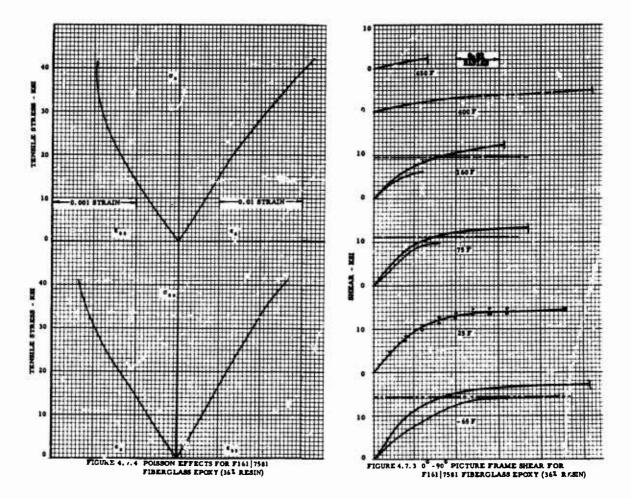






3.27





3.5 QUALITY CONTROL TESTS AND DATA

To insure complete reliability and reproducibility of the material used in this program, Quality Control Testing was undertaken. The prepreg materials were tested for resin content, flow, and percent volatiles. The results of these tests were reported in para. 2.1. Mechanical testing was also conducted on parallel ply lay-up 12 inch by 15 inch by 14 ply thick panels made of each of the four (4) rolls of prepreg used to fabricate laminates (see Reference 1).

The mechanical tests performed were in accordance with the following ASTM methods:

ASTM D638-68	Tensile Properties of Plastic
ASTM D695-68T	Compressive Properties of Rigid Plastic
ASTM D790-66	Flexural Properties of Plastic
ASTM D2345-65T	Interlaminar Shear Strength of Plastic Structures
	at Subnormal and Supernormal Temperatures
	(notched tensile loading using side support plates)

The results of the tests run at room temperature follow:

	PRE	PREG 7581/F	161 - 505	
	ROLL A*	ROLL B*	ROLL C*	ROLL D*
Laminate group(s) in which Prepreg was used	III	II	II & I	I
Tensile Strength, KSI **	65.45	69.11	69.05	73.92
Compressive Strength, KSI **	61.00	63.16	57.69	63.89
Flexural Strength, KSI **	88.37	92.14	90.80	97.41
Interlmainar Shear Strength, KSI ***	2.23	2.40	2.20	2.14

^{*} The A, B, C, and D designations correspond to different prepreg resin content, flow, and volatiles to provide the three major resin content laminates (see Section 4 and Table 2-1)

^{**} Average of 10 tests.

^{***} Average of 5 tests.

SECTION 4

DESCRIPTION OF SERIAL NUMBERED LAMINATES

4.1 FABRICATION FF.OM PREPREG MATERIAL

As noted in para. 2.2, the laminates tested were constructed of eight (8) and ten (10) ply layups. There were four (4) rolls of 7581/F161-505 prepreg material (identified by: A, B, C, and D) used in this program. The mechanical properties of these rolls are given in para. 3.5. These prepreg materials were distributed in the various serial numbered laminates in the following manner:

S/N 1 and S/N 2 - preliminary panels made for program guidance and not used to generate data

```
S/N 3
          8 plies of roll A prepreg
S/N4
          8 plies of roll A prepreg
s/N 5
          8 plies of roll C prepreg
s/n 6
          8 plies of roll A prepreg
s/N 7
          4 plies of roll A + 4 plies of roll B prepreg
s/n 8
         10 plies of roll D prepreg
s/N 9
         10 plies of roll C prepreg
S/N 10
          6 plies of roll A + 4 plies of roll B prepreg
S/N 11
         5 plies of roll A + 5 plies of roll B prepreg
S/N 12
         10 plies of roll D prepreg
s/N 13
         5 plies of roll C + 5 plies of roll B prepreg
S/N 14
          l ply of roll B + 7 plies of roll A* prepreg
S/N 15
          1 ply of roll B + 4 plies of roll C* + 5 plies of roll A* prepreg
          1 ply of roll B + 7 plies of roll A* prepreg
s/N 16
```

^{*} These plies were from a second shipment of prepreg required to complete the contract.

4.2 DISTRIBUTION OF LAMINATES INTO GROUPS

To meet the requirement of generating mechanical property data for material of various resin contents, the serially numbered laminate panels were collected in groups, as follows:

GROUP I - (26% average resin content) S/N 5, S/N 8, S/N 9, S/N 12, and S/N 13

GROUP II - (31% average resin content)
S/N 7, S/N 10, S/N 11, and S/N 15

GROUP III - (35.6% average resin content) S/N 3, S/N 4, S/N 6, S/N 14, and S/N 16

SECTION 5

REFERENCES

- Dastin, S.J., Lubin, G., and Munyak, J.A., <u>Determination of Principal Properties of Fiberglass Epoxy Laminates for Aircraft</u> First Quarterly Report, February 1968.
- 2. op. cit. Second Quarterly Report, May 1968

SECTION 6

APPENDICES

APPENDIX I - Tabular Test Data-Group I (26% Resin Content) Laminates

Tension: Tables AI-1 to AI-18

Compression: Tables AI-19 to AI-36

Picture Frame Shear: Tables AI-37 to AI-40

Poisson's Ratio: Tables AI-41 to AI-43

APPENDIX II - Tabular Test Data-Group II (31% Resin Content) Laminates

Tension: Tables AII-1 to AII-14

Compression: Tables AII-15 to AII-28

Picture Frame Shear: Tables AII-29 to AII-34

Poisson's Ratio: Tables AII-35 to AII-38

APPENDIX III - Tabular Test Data-Group III (35.6% Resin Content) Laminates

Tension: Tables AIII-1 to AIII-18

Compression: Tables AIII-19 to AIII-36

Picture Frame Shear: Tables AIII-37 to AIII-42

Poisson's Ratio: Tables AIII-43 to AIII-44

TABLE - AI-1 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	 	TEST DIRECT	ECTION	,	SPEC.	COND	SPEC. CONDITIONING	2	٢	TEST COND	و		RESIN CONT.	ONT.	1	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 13, S/N 9, S/N 5	TENSION	Z		8			66° F	66° F FOR 1 HR	E.		•	66°F FOR 30	R 30		26.0%	×	<u> </u>	7900		
STRAIN IN./IN.	N./IN.		.002	8	900	900	.010	٠10.	≯10 .	910.	810.	.020	.022	.024	920.	920.	030	MAX	STRAIN	AREA
SPEC.	T(1)	w(1)						.99	STRESS - KS	150			•	1					STRESS	Z.
S/N 9 - 111	.082	8	07.3	14.7	22.0	29.4	35.8	42.5	40.0	220	61.0	67.1	73.0	78.0				80.6	.0247	.0408
118	280	, 8	08.8	16.5	22.2	27.5	33.9	40.6	46.7	52.9	59.0	66.5	71.3	77.5	82.5	88.3		90.4	.0280	.0407
127	88	8	7.80	17.0	22.2	7.72	33.8	40.0	46.0	51.9	57.8	2	89.6	75.5	80.5	83.7		86.0	.0282	.0424
130	.083	8	68.5	16.4	21.8	27.8	33.9	40.6	46.6	52.5	58.5	64.5	9.07	76.7	82.5	87.8	93.0	96.2	0150.	.0414
132	190.	8	89.5	17,4	22.9	28.9	35.1	42.4	48.5	54.5	60.5	66.7	72.3	78.5	84.6	90.0		94.0	.0296	.0402
133	180.	\$	6.60	17.3	23.3	29.5	36.0	42.1	48.3	54.5	60.7	6.99	73.0	79.3	84.6	89.4		93.2	₩620:	.0404
85	.082	5 6	09.9	17.3	22.9	29.3	36.8	42.1	48.5	54.7	60.3	66.5	72.6	78.9	84.9	90.6		93.0	.0290	9040
148	.08 0	789.	08.5	17.3	22.6	28.9	35.4	41.9	47.7	54.3	60.3	66.5	72.9	78.6	84.4	90.3	90.3	4.8	.0318	9860
S/N 5 - 88A	890	8	08.9	17.1	22.4	28.0	33.9	40.2	46.3	52.8	29.0	63.6	69.3	75.3	81.0	87.4		93.3	0300	.0339
100A	.067	497	0.00	16.8	22.6	28.2	34.6	40.5	46.5	52.5	58.5	64.6	70.5	76.5	82.5	87.4		92.5	9620	.0333
AVERAGE STRESS	ESS						70	TA CO	NTINUI	DATA CONTINUED ON NEXT PAGE	NEXT P	AGE								
STANDARD DEVIATION STRESS	RESS																			
AVERAGE STRESS-3 <i>G</i>		!																		

FOOTNOTES: (1) TO NEAREST .DO1"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

DATA CONTINUED FROM PREVIOUS PAGE TABLE - AI-1 REDUCED TEST DATA

The second secon

S/N13.S/N9.S/N5 STRAIN · IN./IN. SPEC. T(1) W(1) S/N 13 · 126 S/N 1	.008 32.6 28.3 31.1		A 58.5		65°F For 30 Min 018 020 .022 77.0 73.7 79.7 4.5 71.6 78.0 11.1 67.3 73.6 4.6 71.0 77.4	0Min .022 .027 .78.0 .73.6 .73.6	26	26.0%	.028 .030	.0082 0 MAX	_	
.002 .004 .006 .006 .006 .006 .006 .006 .0083 .496 .08.8 17.0 .24.6 .21.7 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	29.3 31.1 31.2				73.7 71.6 67.3 71.0	78.0 78.0 73.6 73.6	-			_	_	
.083 .496 .08.8 17.0 24.6 .079 .497 .07.7 14.5 21.7 ' .083 .494 .08.8 17.6 23.2 .081 .496 10.7 19.4 24.8 .082 .496 11.1 19.4 24.6 .082 .496 11.1 19.4 24.6	32.6 29.1 36 29.3 35 31.1 38			64.6 64.6 64.6	73.7 71.6 67.3 71.0	78.0 73.6 77.4		_			_	AREA
.083 .496 .08.8 17.0 24.6 .079 .497 .07.7 14.5 21.7 ′ .083 .494 .08.8 17.6 23.2 .081 .496 10.7 19.4 24.8 .082 .496 11.1 19.4 24.6 .082 .496 11.1 19.4 24.6	29.3 35 29.3 35 31.1 38			.64.5 64.5 64.6	73.7 71.6 67.3 71.0	79.7 78.0 73.6 77.4					STRESS	Z.
.083 .494 08.8 17.6 23.2 .081 .496 10.7 19.4 24.8 .082 .496 11.1 18.9 24.6 .082 .496 11.1 19.4 24.6 .082 .497 11.1 19.7 25.8	29.3 35 31.1 38 31.2 37	4 7 8		2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	71.6 67.3 71.0	73.6	·			84.5	.0233	1140.
.083 .494 .08.8 17.6 23.2 .081 .496 10.7 19.4 24.8 .082 .496 11.1 18.9 24.6 .082 .497 11.1 19.7 25.8	31.1 38 31.1 38 31.2 37	71 80	2 8	64.6	67.3	73.6	82.2	,		85.8	9920	.0392
.082 .496 10.7 19.4 24.8 .082 .496 11.1 18.9 24.6 .082 .496 11.1 19.4 24.6 .082 .497 11.1 19.7 25.8	31.1 38	_	88	9.	71.0	77.4	80.0	86.5	93.2	96.2	.0290	.0410
.082 .496 11.1 18.9 24.6 .082 .496 11.1 19.4 24.6 .082 .497 11.1 19.7 25.8	31.2 37	_					84.0	89.9	•	93.0	.0270	.0402
.082 .497 11.1 19.7 25.8		44.2 50.9	9 57.2	63.4	70.0	76.1	82.5	89.0	94.5	98.3	.0295	.0407
.082 .497 11.1 19.7 25.8	6 30.7 37.0	43.8 50.4	4 56.7	63.0	0 69	75.0	81.0	87.8	93.8 97.7	0.88.0	1000	.0407
	8 32.0 38.5	46.4 62.0	0 58.2	64.9	71.2	77.4	83.5	89.5	95.8	88.2	.0292	.0407
148 .082 .497 10.3 19.2 24.6 31.0	6 31.0 37.3	44.3 50.4	4 56.7	62.9	(I) -	75.0	81.0	87.1	93.3	96.5	(1)	.0407
149 .082 .498 10.1 18.4 23.8 30.0	8 30.0 36.8	43.2 50.0	9.4	62.4	68.7	75.0	81.0	87.1		91.0	2720.	.0408
150 .081 .491 11.1 20.1 25.2 31.7	2 31.7 38.4	46.7 62.7	7 59.0	65.0	71.5	9.77	1.78	90.0		93.9	7.720.	9600:
AVERAGE STRESS 9.3 17.6 23.4 29.7	4 29.7 36.2	42.8 48.8	8 55.4	61.7	67.8	74.0	•		•	92.4	.0286	
STANDARD DEVIATION STRESS 1.10 1.53 1.45 1.55	5 1.52 1.86	1.69 2.20	0 2.48	2.59	2.65	3.03				5.16	11200.	
AVERAGE STRESS-90" 6.0 13.0 19.0 25.1	0 25.1 30.8	37.7 42.2	2 49.0	53.9	59.9	6.59				77.0	.0206	

FOOTNCTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

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TABLE - AI-2 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ST	<u> </u>	ST DIR	TEST DIRECTION	z	SPEC.		CONDITIONING	, de	F	TEST COND	NO.	L	RESIN CONT	CONT	Ž	NOMINAL PER		PLY THICKNESS
S/N 12, S/N 9, S/N 5	TENSION	3		906			986	66° F FOR 1 HR	Œ		-88°F	66°F FOR 30 MIN	Z		26.0%		-	.0082		
STRAIN IN./IN.	N./IN.		200	900	900	80	010	.012	.014	910.	810.	020	.022	.024	920	028	089	MAX	STRAIN	AREA
SPEC. NO.	T(1)	w(1)							STRESS · KSI	. KSI									STRESS	Z Z
S/N 9 - 119	2 6.	.4 85	4.8	15.9	20.4	25.8	31.2	37.3	42.1	48.1	53.5	59.0	64.3	8.88	74.5	4.67		81.5	0880	9140
121	386	\$	4.8	15.0	20.2	25.7	31.0	37.0	42.6	47.6	53.5	59.4	64.4	69.4	74.9	79.9		82.6	.0294	.0420
123	.078	\$	10.4	15.9	22.6	28.6	33.8	40.3	46.7	51.7	57.6	63.7	69.0	75.4	80.5	85.7		87.4	9880	.0385
125	.083	.497	68.7	15.7	21.3	28.6	32.3	38.6	43.8	49.5	54.6	60.3	65.5	70.9	76.0	80.6		83.0	.0286	.0413
136	98	\$	08.7	15.6	21.0	28.0	31.6	37.4	43.3	48.7	54.1	59.3	64.7	70.3	•			72.9	.0256	.0405
139	.083	.498	08.9	15.7	20.6	25.9	32.0	37.5	43.5	48.4	54.5	59.5	65.5	71.0	76.0			78.3	.0291	.0414
141	.083	.493	08.6	15.1	20.0	25.6	30.5	36.6	42.0	47.5	52.5	57.4	62.3	67.0				70.2	.0268	.0410
S/N 5 - 5	.067	984.	8.	15.1	19.6	25.3	30.2	35.6	40.7	46.5	51.2	55.7	60.2	,				6.09	2220	.0332
ō	.067	489	08.7	15.8	20.8	25.9	31.4	36.6	42.1	48.9	51.9	57.5	62.3	67.0	,			0.69	.0248	8220
111	.69	498	09.6	16.3	21.3	26.8	32.2	37.8	42.B	48.0	52.9	57.7	ı					62.3	8120.	6220
AVERAGE STRESS	tess						DATA	CONT	INUED	CONTINUED ON NEXT PAGE	KT PAG	w.								
STANDARD DEVIATION STRESS	RESS																			
AVERAGE STRESS-3 C																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-2 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

ICKNESS		AREA	Z.	0416	.0405	9860	9040	.0424	0110	.0383	1820.	.0381	7,750.			
NOMINAL PER PLY THICKNESS		STRAIN	STRESS	.0226	.0228	9120.	.0228	0220	₩.0194	.0216	.0224	0224	.0226	.0242	\$1500	.0148
OMINAL P	.0082	MAX	2	56.0	57.3	57.0	58.5	54.5	52.0	66.5	88.8	66.3	0.69	87.8	10.66	35.9
2	-	030														
CONT		.028														
RESIN CONT.	26.0%	920									l					
-	<u> </u>	024					•				-	,	1			
N N	Z	.022		54.7	56.4		57.1			,	67.5	4.89	67.6			
SPEC. CONDITIONING TEST COND	-65° FOR 30 MIN	020		50.5	52.0	53.0	53.0	51.3		61.4	62.5	63.0	63.1			
=	-66° F(810.	1	46.4	47.6	48.5	48.8	47.3	48.8	1.98	57.8	57.5	57.0	52.2	3.68	41.2
J _o		910.	KSI	42.1	43.0	44.2	43.8	42.5	44.4	4.0	51.2	52.0	51.2	47.4	2.86	38.8
SPEC. CONDITIONING	1 HR	-014	STRESS . KSI	37.2	38.5	39.2	39.4	37.8	39.8	4.6	46.0	46.0	45.9	42.2	2.74	34.0
GOND	FOR 1	.012	S	32.4	33.6	3.1	38.4	33.1	34.6	38.6	40.2	40.2	39.8	36.8	2.47	30.5
SPEC.	-65° F FOR	010.		27.9	29.1	8.62	29.8	29.1	30.2	32.6	34.2	34.2	34.2	31.4	1.81	28.0
-		800		23.2	24.2	24.5	24.6	23.6	25.4	27.4	28.9	27.8	28.1	26.0	25.	21.4
CTION		98		18.7	19.5	20.2	19.7	19.4	20.0	21.2	22.8	22.3	22.3	20.7	1.15	17.2
TEST DIRECTION	90 ₀	200		14.9	15.8	15.8	16.0	15.4	16.4	17.0	17.9	17.3	17.3	16.0	1.24	12.3
TES	72	2002		07.7	68.7	08.3	6.90	8.7	8.60	8	10.0	09.5	08.3	9.0	0.64	7.1
15			W(1)	689	88	88	88	.487	8	.497	.495	.495	984			
TYPE TEST	TENSION	7	τ(1)	.785	88	. 18	8	.89	.083	770.	720.	720.	920.		1 12	
PANEL NO. TY	S/N 9, S/N 5 S/N 12	STRAIN IN IN IN.	SPEC. NO.	S/N 12 - 139	178	184	192	157	199	203	205	208	211	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-30

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-3 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ST	TE	TEST DIFECTI	ECTION	2	SPEC.	SPEC. CONDITIONING	TIONIE	9	1.	TEST COND.	ND.	_	RESIN CONT.	CONT.	ž	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 6, S/N 9	TENSION	Z		0	00		96% R	86% RH © 125º FOR 42 DAYS	50 F		46°F F	66°F FOR 30 Min.	Min.		26.0%			0083		
STRAIN - IN./IN.	JIN.		200	700	88	900	010.	.012	.014	910.	810.	020	.022	.024	920	8Z0.	030	MAX	STRAIN	AREA
SPEC. NO.	10	W(1)						, sa	STRESS - KSI	3								250	STRESS	7 . 2
S/N 5-84	790.	.407	89.3	18.6	25.5	31.6	37.8	£.1	80.5	67.7	63.6	4.08	75.8	81.0		 		87.5	.0260	0373
73	990	.407	89.2	18.3	25.6 ′	31.1	37.8	44.3	50.3	56.7	64.0	69.5	78.4					79.6	.0240	.0328
8	780.	.467	09.2	19.0	25.8	31.3	37.4	.	50.7	57.C	63.5	70.0	78.5					79.0	.0234	.0326
116	990:	\$	11.9	21.0	27.4	32.8	28	46.0	51.1									56.4	.0158	.0329
82A	.067	26	1.00	18.1	25.4	31.6	37.7	43.4	46.8	56.4	62.4	68.6	74.1	•				75.0	.0224	ZXE0.
S/N 9 - 131	9	\$	10.2	19.2	25.2	31.2	37.2	43.8	50.4	57.0	63.5	9.69	75.5	81.0				₹.98	95-20:	7116.
134	.082	.407	98.8	18.4	26.0	31.4	38.2	4.6	51.5	57.5	63.8	6.0	76.1			-		78.5	.0226	.0408
146	189.	88	6.90	19.2	26.3	31.7	38.4	46.4	52.0	58.1	64.9	70.9	775	2.7	93.6			87.3	.0262	9040.
147	286	8	1.1	19.7	25.6	31.8	38.2	4.4	51.2	67.9	64.0	73.2	76.4	82.5				0.88	97.70	.0406
148	8	.498	00.3	18.6	25.0	31.2	38.4	44.6	51.0	58.1	4.4	70.5	77.3	83.0	,			88 .	.0256	20 +0.
AVERAGE STRESS	SS		2,8	19.0	25.6	31.6	38.0	4.5	50.8									80.5	.023	
STANDARD DEVIATION STRESS	ESS		1.10	E8 0	0.66	0.49	99.0	0.61	20.								1	10.87	11887.	
AVERAGE STRESS-30			6.5	16.5	23.5	30.2	36.3	42.7	48.9							 		47.9	1. 1. 1. 1.	

FOOTNOTES: (1) TO NEAKEST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE UF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI-4 REDUCED TEST DATA

		TE	TEST DIRECT	ECTION	-	SPEC.	SPEC. CONDITIONING	TIONIA	90	7E	TEST COND	Ö		RESIN CONT	N.	WO?	INAL PE	JOMINAL PER PLY THICKNESS	IICKNESS
TENSION	,		98			96. 7.	96% RH @ 126 ⁰ F FOR 42 DAYS	76°F JAYS		-86° F	86° F for 30 MIN.	Z.		28.0%			.0082		
STRAIN IN IN.		.002	8	88	8	.010	.012	.014	910.	810	020	.022	024	0.00	.028	03 C M	MAX	STRAIN	AREA 3
T(1)	W(1)						•	STRESS - KSI	. KS								}	STRESS	Z
95	\$	8.80	16.7	22.2	27.2	31.6	38.6	43.9	40.1	4.	58.9					9	50.7	.020	.0342
8	8	9.6	18.3	23.2 ′	28.8	34.0	39.6	44.5	40.7	66.0						1 0	59.5	9610.	4460.
.067	88	1.80	16.8	22.2	27.9	3.16	39.6	46.0	50.3	29.7	61.1			-			6.99	≘ 8	ACEO.
.067	\$	6.80	17.1	22.9	28.3	33.2	40.2	46.5	5.03	₹8.	٠					-	59.2	(3) (3)	PCS0 .
8 6.	8	10.6	18.6	121	29.6	36.6	42.0	47.5	,							- 2	51.0	.0168	8Z20
8	8	10.4	18.2	24.8	30.1	8	7.2	6.3	0.7							26	56.0	.0166	.0319
286	8	11.6	20.0	35.8	32.0	37.8	4.0	80.4	2	62.1	67.9	,				,	0.17	.0212	.0314
8	0	11.5	20.0	28.5	31.8	37.3	52.6	5.	56.5				_			10	56.0	.0174	.0314
8	\$	8.8	18.3	7	28.8	38.2	42.4	48.7	8.8	80.5	198	9.17					75.5	.0233	.0312
8	\$	8.	17.0	24.0	30.4	38.6	6 0.7	46.2	58.3	57.5	62.6	,				_	0.00	A1 20.	.0329
AVERAGE STRESS		8.8	18.2	22.8	20.6	38.1	41.3	47.0				,					62.3	.0197	
STANDARD DEVIATION STRESS		1.16	124	1.20	1.57	1.9	1,53	3.27									5.01	19700	
		6.3	14.2	18.9	24.9	28.3	38.8	37.2							-	-	47.3	.0124	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BLT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-6 REDUCED TEST DATA

TEMSION GP 000 000 010 012 014 0150 F 500 100 012 014 0150 P 520 F FOR 30 MIN FOR 42 DAYS F TOR 30 MIN FOR 42 DAYS F TOR 30 MIN FOR 42 DAYS F TOR 30 MIN F TO 500 F 600	PANEL NO.	TYPE FEST	EST	<u> </u>	ST DIR	TEST DIRECTION	<u> </u>	S EC.	COND	SPEC. CONDITIONING	ပ္ခ		TEST COND.	9	, a	RESIN CONT.	ONT.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
TRAIN IN.IN. COC COCA COCA COCA COCA COCA COCA COCA	1 S/N 5	TENSI	ĕ		8]		FOR A	H 0 12	00 80 F		25° F.	FOR 30	Z		26.0%		-	.0082		
EC. T(1) W(1) Oces .466 08-9 19-2 25-4 31.7 38-7 46-4 51.8 56-5 66-0 Oces .466 08-9 19-2 25-4 31.7 38-6 46-7 52-0 58-7 64-5 Oces .466 08-7 17.1 24-8 31.1 37-6 44-0 50.0 56-5 62-5 A .067 .466 08-7 17.1 24-8 31.1 37-6 44-0 50.0 56-5 62-5 A .067 .466 08-0 17-5 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .466 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .067 .468 08-0 17-6 24-6 31.0 37-3 43-6 50.0 56-6 62-6 A .068 .77 .47 .47 .47 .47 .47 .47 .47 .47 .47	STRAIN IN	i./IN.		700	8	900	8	010.	.012	.014	910.	810·	_	⊢—		920	820	g	MAX	STRAIN	AREA
A066 .486 .099 19.2 25.4 31.7 38.7 46.4 61.8 68.6 65.0 66.0 66.6 62.5 62.6 480 10.2 18.5 25.0 31.4 37.6 44.0 60.0 56.6 62.5 62.3 4.4 .0 60.0 56.6 62.5 62.5 62.5 62.5 62.5 62.5 62.5	SPEC. NO.	1(1)							•	TRESS	3								200	STRESS	Ž.
.066 .466 10.4 18.7 26.0 31.7 36.6 46.7 52.0 58.7 64.5 62.6 .067 .406 .08.7 17.1 24.8 31.1 37.6 44.0 50.0 56.6 62.6 .067 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .067 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .067 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .067 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .087 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .087 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .087 .406 .09.0 17.6 24.6 31.0 37.3 43.6 50.0 56.6 62.6 .088 .716 .007 .007 .007 .007 .007 .007 .007 .00	S/N 6 - 38	890		8	Ĺ	8	31.7	-	46.4	61.8	5.83	68.0					-		70.2	0020	.0322
.067 .406 .08.7 17.1 24.8 31.1 37.6 44.0 50.0 56.5 62.5	87		-	10.4			31.7	8.6	6.7	62.0	26.7	2.5	,						69.5	.0200	71:30:
.067 .406 08.7 17.1 24.8 31.1 37.6 44.0 50.2 57.0 63.3	114	990		10.2			31.4	—	40.	95	30	62.5							67.0	19 10.	.0324
TRESS - 067 - 466 09-0 17.6 24.6 31.0 37.3 43.6 60.0 56.6 62	81 A	.067		88.7		24.8	31.1		0.4	50.2	67.0	63.3	0.0			-			70.5	.0208	.0332
TRESS 9.6 18.2 25.2 31.4 30.0 44.5 50.8 57.5 STRESS	8	.8		80.0		_	31.0		43.6	60.0	56.6	$\overline{}$	88.5						70.5	9020	.033 4
TRESS 9.6 18.2 25.2 31.4 38.0 44.5 50.8 57.5 STRESS																					
TRESS 9.6 18.2 25.2 31.4 30.0 44.5 50.8 57.5 STRESS																		 			
TRESS 9.6 18.2 25.2 31.4 38.0 44.5 50.8 57.5 STRESS																	-	i			
TRESS 9.6 18.2 25.2 31.4 30.0 44.5 50.8 57.5 STRESS																					
TRESS 9.6 18.2 25.2 31.4 38.0 44.5 50.8 57.5 STRESS																-					
STANDARD DEVIATION STRESS AVERAGE	AVERAGE STRI	ESS		9.6		26.2	31.4	38.0	44.5	8.03	57.5	63.6				<u> </u>	<u> </u>	 i	69.5	.0202	
AVERAGE	STANDARD DEVIATION ST	RESS																			
SIMESSAGO	AVERAGE STRESS-30																	—— 			

FOOTNOTES

(1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-8 REDUCED TEST DATA

90° SSN NH 0 128 FOR 42 LAYS OE	SPEC. CONDITIONING T	TEST COND.	RESIN CONT.	NOMINAL PER PLY THICKNESS	Y THICKNESS
17.8 23.0 28.3 34.2 18.1 23.8 22.7 28.3 34.1 18.5 23.2 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28	3	25° F FOR 30 MIN'	26.0%	9900:	
17.8 23.0 28.3 34.2 19.1 23.8 23.0 34.8 17.3 22.7 28.3 34.1 18.5 21.6 28.7 38.8 19.1 22.9 28.3 23.8 23.8 24.4 22.8 28.7 34.4	910. 910. 510. 210.	A20. S20. 020.	820° 920°	.030 MAX STRAIN	IN AREA
17.8 23.0 28.3 34.2 10.1 23.8 22.7 28.3 34.1 18.5 21.6 28.3 34.1 18.1 22.9 28.3 33.8 18.1 22.9 28.3 33.8 18.1 22.9 28.3 33.4 23.8 28.2 38.4	STREMS - KSI				
19.1 22.9 28.0 34.1 13.5 21.5 28.7 38.8 19.1 22.9 28.3 33.8 19.1 22.9 28.3 33.8 19.4 22.8 28.7 34.4	384 449 80.0 86.3			67.3 .0198	.0347
18.5 22.7 28.3 34.1 18.5 21.6 28.7 38.8 18.1 22.9 28.3 20.8 18.4 22.8 28.7 34.4	40.0 46.6 50.8 ·			56.4 .0178	3960
18.5 21.8 28.7 38.8 19.1 22.9 28.3 20.8 18.4 22.8 28.7 38.4	38.8 46.6 61.4 66.6			59.3 C130	.0330
18.1 22.9 28.3 20.8 18.4 22.8 28.7 28.4	41.3 47.1 62.5 68.1			58.6 .0182	5250
18.4 Z.8 28.7 38.4	40.2 46.7 50.8			0810. 8.88	
18.4 Z.5 28.7 34.4					
18.4 ZZ 28.7 38.4					
18.4 228 28.7 38.4					
18.4 228 28.7 38.4					
18.4 22.8 28.7 38.4					
	40.1 46.8 61.1			57.4 .0188	

FOOTWOTES: (1) TO NEAREST .001"

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURNED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPLATED FOR RECONDING PURPOSES BUT DELETED FROM AVERAGES BELATER OF LOSSPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

PANEL NO.	TYPE TEST	EST	TE	TEST DIRECT	RECTION	3	SPEC	COND	SPEC. CONDITIONING	وَ		TEST COND	Ģ		RESIN CONT.	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N S	TENSION	z		8			125°	125° F © 95% RH FOR 42 DAYS	S AH		RT				28.0%					
STRA	N SN		200	8	98	8	010	210.	¥10.	910	810	020	.022	0.24	920	820	030	MAX	STRAIN	AREA
SPE NO	(L) ±	W(1)							STRESS - KS	KŠ.								2	STRESS	2
S/N 5 - 86	.067	88	0.60	17.4	25.	8	37.3	44.0	6.04	5.5								59.3	07.10.	.0332
8	8	\$	0.60	17.6	24.9 ′	31.2	37.4	44.3	50.7	56.9	62.8							64.0	.0192	.0318
113	8	\$	8.8	17.4	24.8	31.2	37.2	\$	50.3										.0154	.0327
VQ8	8	497	8.	17.4	24.1	30.4	36.6	43.0	48.8	55.5	60.6	,						61.1	.0182	.0338
83A	880	436	8.8	17.3	24.2	8	36.6	42.8	0.0	55.0	,							60.0	.0180	.0338
8	8. E	.407	10.1	18.6	29.7	32.0	39.1	46.8	52.6	59.3	64.4							64.9	.0185	.0313
16	8	8	8.08	18.1	8	31.8	8.4	45.2	51.0	57.4								61.0	2710.	.0313
æ	8 6.	8	88.6	16.7	24.7	31.2	37.7	44.2	50.9	57.0	61.7	,						62.0	.0184	.0312
ā	9 6.	8	8.6	18.2	25.8	32.6	38.5	46.2	51.4	58.0	•							62.9	.0180	.0313
88	9	.466	98.4	17.9	26.0	32.8	39.2	46.5	51.9	585	63.8					-		\$.5	.0185	8150
AVERAGE STRESS	SS		09.5	17.7	26.3	31.4	37.8	44.4	50.6									61.4	8710.	
STANDARD DEVIATION STRESS	RESS		0.47	0.55	0.75	4	0.95	1.02	96.0									3.20	.00133	
AVERAGE STRESS-3 σ			0.80	16.0	23.1	28.9	34.9	4.2	47.8									51.9	.0138	

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DE 12 TED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

YAMEL NO.	TYPE TEST	ST	TE	TEST DIRECTI	ECTION		SPEC.	SPEC. CONDITIONING	TIONIN	<u>5</u>	TE.	TEST COND	ō	Œ	RESIN CONT.	NT.	NON	INAL PE	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 5	TENSION	z		908			125°1	126° F @ 95% RH FOR 42 DAYS	HE			RT			28.0%					
STRAIN IN./IN	ZI.		.002	8	900	800	010.	.012	.014	.016	810.	020	220.	.024	0.0	0. 820	030	MAX	STRAIN	AREA
SPEC. NO.	T(1)	w(1)						s	STRESS - KSI	35						-	<u>, </u>	3	STRESS	Z Z
S/N 5 - 28	8	8	0.80	15.4	21.2	26.5	32.0	37.3	42.7	47.6	•						•	6.9	0710.	.0339
8	8	\$	68.9	16.4	22,	77.4	32.6	38.2	43.8	48.5	·						•	1.0	.0163	.0339
F	8	\$	88.9	16.9	22	27.4	32.8	38.5	43.9					•			-	46.9	.0147	.0039
×	8	700	09.2	16.8	22.2	27.2	32.6	38.4	43.4	48.6							•	6.9	.0167	9020
æ	980	8	83	15.4	21.5	27.0	22.2	37.5	43.2	47.8	٠							40.3	0710.	0340
\$	8.	78	8	16.3	22.2	77.72	32.8	38.7	47.5	,			1				_	68.2	.0\57	9000
â	9.	\$	8.8	16.8	22.8	28.0	a	900	46.7	51.2							· •	63.0	9910.	8220
\$	8	205	8	16.4	21.4	28.8	122	38.0	43.3	48.4				-				0.03	8810.	9036
*	8	8	83	16.5	77.7	28.0	225	28	80	33							9	63.2	0710.	0000
23	.063	.467	00.8	17.5	22.8	29.3	38.4	42.0	4.4	63.9	•						9	4.6	991 0.	E189.
AVERAGE STRESS	2		8.7	16.2	22	27.7	33.0	38.8	44.5						-		-	2	3610 .	
STANDARD DEVIATION STRESS	ER			٤.	ın.	187	1.06	1.41	1.78								7	197	37000.	
AVERAGE STRESS-30			7.3	14.1	19.9	28.3	29.6	34.6	39.2						-	-	-	2.5	.01426	
AVERAGE STRE STANDARD DEVIATION STR AVERAGE STRESS-30			4. 4. 5.			20.72 E. 20.23 E. 20.		이 위 김 치		38.1 1.78	38.1 1.78	1.78	1.78	1.78	1.78	1.78	1.78	44.5 1.78 39.2	1.78	44.5 53.9 54.6 54.6 54.6 54.5 54.5 54.5 54.5 54.5

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-9 REDUCED TEST DATA

S/N 13, S/N 8 TE		15	TE	TEST DIRECT	ECTION	,	SPEC.	CONDI	SPEC. CONDITIONING	2	TE	TEST COND.	Ģ	- C	RESIN CONT	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
	TENSION	,		9			2	NONE			180°F	160°F FOR 30 MIN	2		28.0%		_	0800		:
STRAIN IN./IN	z		200	8	8	8	010	210.	T ≯10.	910.	810.	020	220.	-024	920	920	020	MAX	STRAIN	AREA
SPEC.	٦(١)	(L) ^M] •	STRESS	9								200	STRESS	Z.
S/N 3 - 87	8	ğ	07.5	15.3	21.2	17.1	33.0	38.8	4.7	9.09	5.6.5	62.4	1					64.6	4120.	.0425
8	8	8	08.3	15.4	21.8	28.0	33.8	40.5	46.3	62.2	1.98	64.0						66.5	.0216	.0421
8	8 2	799	08.8	16.8	22.8	29.5	36.5	42.5	46.0	56.5	61.2	66.2						68.5	.0208	00400
•	86	8	8.4	16.6	822	29.0	35.0	42.0	48.5	54.4	9.09	6.5	ı					70.0	.0214	9860.
8	8.6	53	08.9	16.8	23.1	29.1	35.4	42.1	48.5	5.99	61.5	8.88						₩.00	9020	.0382
81	220	ş	99.3	17.5	24.0	31.0	38.0	46.0	53.0	5.8.7	66.2	1						70.3	2 60	9900
301	7.00.	\$	8.8	17.0	23.1	29.2	36.6	42.2	48.5	54.4	60.5	-						85.0	9610.	7750.
8	.07	788	9.8	16.3	22.6	28.8	36.2	42.1	48.5	54.6	8.08	1						64.3	0196	.0375
8	86	8	8	16.7	22.3	28.3	34.6	41.4	48.0	53.6	60.0	ı						64.0	9610	.0382
108	.00	88	08.0	18.1	22.2	28.2	36.3	41.7	48.1	25	,							6.93	.0180	.0374
AVERAGE STRESS	r _A						_a⁻	TA CO	DATA CONTINUED ON	NO Q	NEXT PAGE	GE								
STANDARD DEVIATION STRESS	S								-											
AVERAGE STRESS-30																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETEN FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

DATA CONTINUED FROM PREVIOUS PAGE TABLE - AI-9 REDUCED TEST DATA

S/N 13, S/N 8 TENSION G ^O .002 .004 .006 .00 SFRAIN IN./IN002 .004 .006 .006 .00 S/N 13 - 127 .081 .487 .08.6 16.9 24.6 31 136 .082 .487 .08.6 16.9 24.6 31 136 .082 .487 .08.6 18.1 24.2 30	8 8	NONE 010 .012 .014		160° F FOR 30 MIN	near Corn		NOMINAL PER PLY INICKNESS		CANESS
AIN - IN_/IN	.006 .006 .008 .008 .008	NONE 210.	Ē	P F FOR 30 MIN					
AIN - IN./IN	23.4 29.8	210.			28.0%			0800	
OST AST OS.2 17.1 23.4 OST AST OS.2 16.1 24.0' OST AST OS.8 16.9 24.6 OST AST OS.8 16.9 24.6 OST AST OS.8 16.9 24.6	23.4 29.8		910.	020 020	0.026	050 820	MAX	STRAIN	AREA
.079 .467 09.2 17.1 23.4 .072 .467 08.5 16.1 24.0' .082 .467 08.6 16.9 24.6 .082 .467 10.0 18.1 24.2	23.4 29.8	STRESS - KSI	5					STHESS	, E
079 .497 06.2 16.1 24.0 ° .052 .487 06.6 16.9 24.5062 .487 10.0 18.1 24.2		35.6 42.7 40.2	66.7 61.5				63.0	.0184	.0463
. ORZ .487 OB.6 16.9 24.5 . ORZ .487 10.0 18.1 24.2	24.0 / 31.4	38.6 46.0 52.0	58.0				64.0	7210.	28620
	24.5 31.4	3.6 46.1 51.5	58.3 64.7				65.9	2810.	9000
082 .467 10.0 18.1 24.2	24.6 31.2	51.6	989				62.0	27.10	9040
	24.2 30.8	20.7	67.4 63.3				67.8	16.0	80%
AVERAGE STRESS 8.8 16.7 23.1 29.	23.1 29.6	38.0 42.8 49.2	56.6			-	86.7	78HJ.	
STANDARD DEVIATION STRESS .50 .50 .99 1.21	121 :28	1.80 2.04 2.21	2.40				303	20144	
STRESS-80 7.3 13.7 19.5 26.	19.5 25.8	30.6 38.7 42.6	46.1				56.6	.0144	

FOOTNOTES: (1) TO NEAREST ,001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE INFALIZED

TABLE - AI-10 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	<u> </u>	ST DI	TEST DIRECTION	3	SPEC.	COND	CONDITIONING	ပ္	_ =	TEST COND	و	-	RESIN CONT.	ONT.	2	MINIAL P	NOMINIAL PER PLY THICKNESS	HCKNESS
SN 12, SN 5. SN 6, SN 9	TENSION	NC		98				NONE			1800	160° FOR 30 MIN	2 3		88			:808:		
STRAIN I	1N./1N.		700	ğ	90	80	010	210.	10.	910.	810	020	720	920	920	820	030	MAX	STRAIN	AREA
SPEC. NO	(1))	W ⁽¹⁾							STRESS · KSI	. KG		1			1			200	STRESS	N.
S/N 8 - 56	076	88	1.8	15.3	20.7	25	31.8	37.6	43.3	48.0	3 5				-			1.38	9610.	.0372
98	770	Q	8.20	16.4	21.8	27.9	33.6	39.8	46.4	50.5	56.3							188	0610	7,50.
67	970.	8	8	15.2	8	26.6	32.0	38.2	4.4	49.8	- 38							575	0610.	.0372
S/N 5 - 1	.087	88	06.9	13.5	18.3	23.6	28.8	33.8	38.9	44.6	,	_						49.7	0.180	4550
80	.067	8	08.0	12.3	18.6	24.8	30.2	36.0	41.0	45.8	,							8.94	4710.	.0334
19	.067	.50	06.6	13.2	20.0	25.7	33.4	37.	42.5	47.8	52.6							56.8	0615	.0335
S/N 9 - 120	980	8	07.6	15.2	20.4	25.7	31.4	36.8	42.3	47.0	(1)							86.8	(E)	1240.
124	.083	\$	0.90	13.2	19,2	24.4	30.2	8.	41.7	47.3	52.2	57.6						62.7	(1)	0180
140	88	407	07.3	14.0	19.7	25.2	31.2	36.8	426	0.8	53.3	(1)						62.1	(1)	6130
142	.083	.497	06.9	13.5	18.4		29.6	35.0	40.3	46.0	6.09							55.0	.0196	213
AVERAGE STRESS	ress						ă	LA CON	TINUE	DATA CONTINUED ON NEXT PAGE	¥4 TX	Ж		-	-					
STANDARD DEVIATION STRESS	RESS															-				
AVERAGE STRESS-30																-				

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE ()CCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

DATA CONTINUED FROM PREVIOUS PAGE TABLE - AI-10 REDUCED TEST DATA

											חשו אין ווויסכום ו יויסשו וווד אוספין שפר	-								
PANEL NO.	TYPE TEST	EST	T.	TEST DIRECT		NO	SPEC	COND	SPEC. CONDITIONING	NG	F	TEST COND	ND.	ur.	RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N 12, S/N 8. S/N 5, S/N 9	TENSION	N.		906	و			NONE	y		190	160°F FOR 30 MIN	30 MIN		26.0%	¥	-		88	
STRAIN - IN JIN.	N./IN.		2003	ş	8	8	010	.012	410.	910.	810.	020	022	.024	920	820.	030	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)					7	(2)	STRESS - KSI	S · KSI								200	STRESS	N.
S/N - 12 - 120	.077	ş	06.3	12.6	19.2	26.0	30.8	88	41.6	48.4								60.9	8/10	.0380
172	8	\$	98.5	130	17.8	22.1	77.2	31.8	37.8	23				-				44.0	20176	0416
081	8	\$	86.2	12.3	17.2	21.4	88.6	31.4	38.1	40.4	44.9	٠						46.9	0810.	.0421
26	8	\$	88.2	12.6	17.5	27.0	27.0	32.2	37.2	41.4	46.0	•						40.5	.0198	1000
196	280	F	8	13.1	17.7	22.5	27.8	32.4	37.0	41.2	46.7	·						47.9	0810	988
88	<u>8</u>	ş.	6.7	13.4	18.1	228	22	8,0	36.3	42.6	47.2							46.1	2810.	0000
202	86.	8	0.0	14.2	19.9	26.3	31.5	37.4	8	ě								63.8	0810	2000
304	86.	8	98.6	16.9	21.2	27.0	32.8	8	*	8.8	·	-						63.6	9210 .	.037 8
206	8 0.	\$	07.4	6.4	986	88	31.8	37.7	43.6	6.3								53.6	87.10.	.0377
200	.07	8	97.4	14.0	20.2	98	31.8	37.7	43.6	40.0	•				#.			24.2	8710.	nec.
AVERAGE STRESS	KESS		7.1		14.0 20.3	24.6	g	9	41.1	86.3								53.6	.0188	
STANDARD DEVIATION STRESS	TRESS		ą	2	-	£.1	205	2.40	28.9	344								6.19	.00123	
AVENAGE STRESS-30			**	10.3	16.3	5	ž	28	12	38.0				·				38.2	.0151	

FOOTNOTES: (1) TO NEAREST .001"

(a) COMPRESSONMETER WAS SHUT OFF DEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPOPTED FOR RECOMPING PURPORES BUT DELETED FROM AVERAGES BECAUSE OF COMPASSION... TER SLIFTAGE

(1) CURVE IDEALIZED

TABLE - AI-11 REDUCED TEST DATA

PANEL NO. T	TYPE TEST	ST	TE .	TEST DIRECT	RECTION	z	SPEC	COND	SPEC. CONDITIONING	و	F	TEST COND	ğ	L	RESIN CONT.	CONT.	Ž	DMINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N 5, S/N 9	TENSION	ž		တ			FOR .	95% RH @ 125° FOR 48 DAYS	S F F		58	F FOR	160° F FOR 10 MIN		28.0%		-	.0083		
STREIN IN JIN	/IN.		.002	900	900	800	010	210.	.014	910.	810.	020	220.	1024	920	820.	980	MAX	STRAIN	AREA
SPEC. NO.	T(1)	w ⁽¹⁾							STRESS - KSI	3									STRESS	Z.
S/N 5 - 86	990:	.497	09.6	16.9	23.8	30.8	37.5	43.6	40.4									52.1	.0150	.0328
112	790.	89	6.60	17.4	24.2	31.2	37.5	,										43.5	.0120	.0328
804	88	8	08.9	16.5	23.6	30.6	36.5	•										40.8	.0114	.0337
V98	.8	19	8.	16.7	1.02	20.1	8.4	40.6	47.9	·								51.6	.0152	6Z£)
Y98	880	8	07.8	15.0	22.0	28.C	34.5	40.5										44.4	.0131	.0333
S/N 9 - 126	28	407	07.2	14.0	21.1	27.8	34.8	42.0	49.1	56.1								56.7	.0168	.0417
128	.082	. # 85	07.6	15.3	22.6	28.8	35.0	41.4	47.5	53.5								54.2	₩910.	.0408
129	85	\$	08.2	18.1	72.7	28.9	35.8	42.0	48.1	54.4								55.0	₽910.	.0405
143	280	ş	08.2	15.8	22.5	29.2	35.6	42.0	48.4	•								53.9	0910.	.0405
141	186	8	08.8	16.4	23.1	27.8	35.5	42.9	40.5	,								54.6	.0158	.0397
AVERAGE STRESS	SS		08.5	16.0	22.9	29.4	35.9											50.7	9510.	
STANDARD DEVIATION STRESS	ESS		.88	1.01	16-	1.23	1.48											5.72	16100.	
AVERAGE ST7ESS-3 <i>G</i>			5.9	13.0	20.2	26.7	31.4									П		33.5	10.1	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI-12 REDUCED TEST DATA

TEST COND. RESIN CONT. NOMINAL PER PLY THICKNESS	160° F FOR 10 MIN . 28.0% .0078	.022 .024 .026 .030 MAX STRAIN		41.9 .0151 .0380	44.6 .0158 .0389	9850. 0910. 4-44	48.2 .0168 .0385	98CO. 8310. 7.44	48.2 .0168 .0383	40.3 .0158 .0378	3750. 1310. 8.8 4	43.5 .0130 .0371		46.5 .0162 .0380	2910.	2910.
20				41.9	44.6	4.4	48.2	44.7	48.2	40.3	48.8	43.5		48.5	24.2	48.5 24.2 28.2
<u> </u>	_			_											1	
1,	26.0%												_		+	
ļ	,,													_	\vdash	+
	NIN.							-		-					-	-
	OR 10	0. CO.														
3	90°F F	0. 810.														
_	-	 _					3						•			-
2		910.	STRESS - KSI			•	63			-	•		8 47.6		_	
5	96% RH @ 126 ⁰ F FOR 42 DAYS	¥10.	STRE	8.	40.2	39.6	41.5	41.3	43.9	44.0	46.8		42.6			
SPEC. CONDITIONING	RH 62 D	.012		8	38.5	36.0	38.4	38.0	38.6	38.6	40.0	38.9	37.3		37.2	_
4	20°	.010		88	8	29.8	30.6	30.8	22.4	32.8	722	34.0	31.7		922	32.6
_		8		24.7	28.2	24.7	26.4	792	77.2	27.0	26.3	*	*		28.3	1.38
		8		19.7	20.1	20.1	20.2	20.6	21.4	21.7	2.4	22.6	21.0		21.0	21.0
LESI CINECI	8	8		14.4	14.7	14.4	14.6	14.4	14.9	15.4	16.0	16.2	14.8		16.0	L
-		700		7.70	08.0	07.6	07.3	7.70	07.3	67.9	080	09.2	07.6		7.8	7.8
ST	١		(L)M	.402	282	2862	.80	2	7	180	8	8	E		1	
TYPE TEST	TENSION	ž	T(1)	.079	670	.078	.078	920	.07	678	978	970	.077		40	8 2
PANEL NO.	SNS	STRAIN IN/IN.	SPEC. NO.	S/N 8 - 31	ន	8	37	8	8	#	8	29	111		AVERAGE STRESS	AVERAGE STRESS STANDARD DEVIATION STRESS

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECONDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-13 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	F	TEST DIRECT	ECTION	2	SPEC.	SPEC. CONDITIONING	TIONIN	õ	=	TEST COND.	Š	- C	RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 8	TENSION	z		ъ			8 u	96% RH @ 126 ⁰ F FOR 42 DAYS	126°F		220°i	220 ⁰ F FOR 10 MIN	10 MIN		29.0%				.0077	
STRAIN IN./IN	./IN.		200	8	900	88	010.	210.	10.	910.	810.	020	220.	.024	920	820	030	MAX	STRAIN	AREA
SPEC. NO.	1(1)	W(1)						S	STRESS - KSI	15								553415	STRESS	<u>2</u>
3	720.	.402	38.5	15.9	22.8	30.2	36.5	43.4	40.3	1								53.0	.0158	.0378
8	720.	\$	0.00	16.4	23.E /	30.5	22.1	43.6	50.0									54.5	.0157	.0380
88	.078	.493	08.3	15.6	22.8	28.2	36.6	42.1	:									47.2	.0134	.0385
102	9.00	493	08.5	16.0	23.0	30.1	36.5	43.0	48.0	1								50.5	.0145	.0375
109	.077	.483	7.80	16.3	23.4	30.3	36.3	42.6	48.5	-								51.2	.0153	.0380
AVERAGE STRESS	ESS		8.6	16.0	23.1	30.0	38.4	42.9	1									51.3	C149	
STANDARD DEVIATION STRESS	RESS																			
AVERAGE STRESS-3 O																				

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI-14 REDUCED TEST DATA

STRAIN - IN-/IN. STRAIN - IN-	PANEL NO.	TYPE TEST	EST		TEST DIRECT	RECTION	z	SPEC.	COND	SPEC. CONDITIONING	ıG	1	TEST COND.	NO.	<u> </u>	RESIN CONT.	ONT.	2	NOMINAL PER PLY THICKNESS	R PLY TH	HICKNESS
T(1) W(1) T(1)	S/N 8	TENSIC	N		88		•	5% RH	125°F	FOR 48	DAYS		FOR 1	O MINS		26.0°F			8	8700.	
- 080 -482	STRAIN . II	V./IN.		.002		8	8	010	.012	A10 .	910.	810.	020	220	1024		920	.03 ū	XAX	STRAIN	AREA
O'00 A62 O'0 13.7 19.3 24.4 280 O'78 A62 O'8.1 14.6 20.0 25.8 30.9 O'78 A62 O'7.3 13.6 19.6 25.0 30.2 34.9 O'76 A67 O(8.0 14.9 21.4 27.5 32.8 38.8 O'76 A63 O(8.0 18.1 21.6 27.7 33.3 38.8 O'76 A63 O(8.0 18.1 21.6 27.7 28.1 21.2 O'76 A63 O(8.0 18.1 21.2 O'76 O(8.0 18.1 21.6 O'76 O(8.0 18.1	SPEC. NO.	T(1)] "	TRESS	5									STRESS	N. <u>≥</u>
778 462 08.1 14.6 20.0 25.8 30.9	*	.080	289.	07.6		19.3	24.4	29.0	ı										32.3	3110.	1960.
078 462 07.3 13.6 19.6 25.0 30.2 34.9 -	8	870.	£63	8				30.8	ı										36.3	0120	3850
O76 467 08.0 14.9 21.4 27.5 32.8 38.6 O76 463 08.0 15.1 21.8 27.7 33.3 38.8 O76 14.8 O77 33.3 38.8 O77 08.0 15.1 21.8 27.7 33.3 38.8 O77 076 08.0 15.1 21.8 27.7 33.3 38.8 O77 076 08.0 15.1 21.8 27.7 33.3 38.8 O77 076 08.0 15.1 21.8 O77 076 076 076 076 076 076 076 076 076 0	8	870.	8	07.3		19.6	25.0	30.2	34.9										30.6	0140	1980
.076 .483 08.0 15.1 21.5 27.7 33.3 38.8	47	970.	704	080	_	21.4	27.5	32.8	38.6										43.4	0410.	8720.
TAESS 7.8 14.4 20.4 28.1	\$	9 .0	8	8		21.6	11.1	g	7										42.5	.0137	3750 .
TAESS 7.8 14.4 20.4 28.1																					
THESS 7.8 14.4 20.4 20.1 STRESS																					
TRESS 7.8 14.4 20.4 26.1 STRESS													7.1								
TRESS 7.8 14.4 20.4 26.1																	- 1				
TRESS 7.8 14.4 20.4 28.1 STRESS																					
STANDARD DEVIATION STRESS AVERAGE STRESSAL	AVERAGE STR	ESS		7.8	14.4	20.4	7	31.2											88	0. 0.00	
AVERAGE	STANDARD DEVIATION ST	RESS																			
	AVERAGE STRESS-30																				

(1) TO NEAREST .001" FOOTWOTES:

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CUNVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE.
(I) CURVE IDEALIZED

TABLE - AI-15 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	-	ST DIE	TEST DIRECTIO	- Z	SPEC.	COND	SPEC. CONDITIONING	و	F	TEST COND.	وِ ا	<u> </u>	RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NS	TENSION	Z.		B			400°F	400 ⁰ F FOR 100 HRS	D HRS		400°F	400°F FOR 30 MINS	MINS		28.0%				9700.	
STRAIN - IN./IN.	JIN.		.002	8	8	90 0	010	210.	≱10 .	910.	810.	020	220.	.024	920	920	020	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)							TAES	5								200	STRESS	Z.
83	.076	101	07.5	14.7	21.3	27.8	34.2	40.5	5.4	51.0	98	,						60.3	1910 .	.0375
88	980	8	8.80	13.0	19.3 ,	26.3	30.8	36.9	42.6	48.1	63.0	ı						56.7	.0196	3140.
88	7.00.	.403	07.4	14.7	21.6	27.9	34.2	41.1	46.8	52.6	67.9	62.4	-					63.0	ZU-200	OBCu'
97	.077	.405	06.8	14.2	20.5	27.3	33.6	40.2	46.8	62.8	0.00	\$2.5	-					62.9	9020	1800
8	.077	.406	07.9	15.5	22.5	28.9	36.0	41.5	87.4	53.5		62.9	_					63.0	2020	1800
101	.076	\$	07.2	14.1	20.6	27.2	33.1	39.2	46.4	50.7	56.5	1						62.0	.0200	3750.
103	9.00	. 803	08.5	15.5	22.2	28.8	36.2	41.6	48.0	53.4	59.3							63.5	9810.	3750.
110	.078	. 8 .	1.88	15.2	22.0	28.2	34.5	40.6	46.5	62.3	67.0							58.2	9810.	.0383
115	8	£63	8.4	13.0	18.9	24.8	30.6	36.5	42.4	47.8	62.3	1						53.1	A810.	.0424
116	980	.405	96.9	12.8	18.5	26.0	30.4	36.8	42.3	47.8	53.5	+	-					56.5	9810.	.0421
AVERAGE STRESS	SS	Ti	7.2	14.3	20.7	27.1	33.3	39.5	46.5	51.0	5.93					 		8.93	9810.	
STANDARD DEVIATION STRESS	RESS		1.02	2.	1.33	1.56	2.00	2.02	2.24	2.36	2.72							3.81	37000.	
AVERAGE STRESS-30			1	11.2	16.7	22.4	27.3	33.4	38.8	44.0	48.3							48.4	.0175	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI-16 REDUCED TEST DATA

PANEL NO. T	TYPE TEST	ST		TEST DIRECT	RECTION	2	SEC	COND	CONDITIONING	و	1	TEST COND	Ģ	<u> </u>	RESIN CONT	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 8, S/N 12	TENSION	2		98	a	•	400° F FOR 100 HRS:	OR 100	HRS:		\$	400° F FOR 30 MIN	30 MI	2	28.0%		9	8/00/		
STRAIN IN IN IN.	JN.		7000	ğ	8	88	010.	210.	410.	910.	810.	020	.022	024	920.	820.	020	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	w ⁽¹⁾							STRESS - KSI	9					1			3	STRESS	ž
S/N 8 - 28	.079	8	0.80	11.3	16.4	21.0	25.0	28.7	-						-			29.5	.0128	.0391
41	.002		06.9	11.6	17.3.	22.4	27.3	22.2										9.	.0139	90406
42	770.	.482	08.3	12.7	18.5	23.8	28.0	34.4										37.9	.0138	9750.
3	.07		683	12.2	17.9	222	3	33.7	37.9	•								38.6	0144	086.3
2		.483	2	13.1	18.7	24.0	28.0	23										36.8	.0131	0800
46	.007	.466	28	12.9	18.7	24.2	28.4	34.7	•									38.4	3610.	1860.
83	.076	.482	06.9	12.3	17.7	222	28.4	32.7	0786	40.7								42.4	.0168	.0374
æ	.070	\$	06.2	11.6	3	21.4	28.8	28.4										30.5	.0124	.0388
9	.07e	789.	08.2	11.6	16.6	21.2	20.0	30.7	34.0									34.4	.0142	8800
19	.076	4	07.6	14.1	19.8	28.4	31.1	38.2	41.1	44.0								44.8	.0164	0.0370
AVERAGE STRESS	S							DATA		DATA CONTINUED ON NEXT PAGE	N NEXT	PAGE								
STANDARD DEVIATION STRESS	ESS																			
AVERAGE STRESS-30																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPONTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-16 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

PANEL NO.	14	TYPE TEST	-	TES	T O'RE	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	ي	=	TEST COND	9	Ĺ	RESIN CONT.	ONT.	ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 8, S/N 12	TEA	TENSION			8			ĝ	F FOR	400°F FOR 100 HRS.	yi	\$	400°F FOR 30 MIN	30 MIN		26.0%	ž			8700.	
STRAIN INUIN	IN./IN			8	ğ	98	8	010	210.	\$10.	910	810.	020	022	024	920	820	020	MAX	STRAIN	AREA
SPEC	-	() _L	W(1)						1	STRESS - KSI	5				1					STRESS	N.
S/N 12 121	,	770.	3	7.8	6.01	1.91	21.0	25.4	28.6								-		31.2	.0130	.0385
140		.083	8	06.3	10.1	14.9	19.3	23.6	27.0	1									27.5	.0124	.0415
194		.082	8	04.9	60.8	14.5	18.9	23.1	27.0	1							 		29.1	.0136	.0407
102		.076	700	96.4	12.2	17.5	23.0	28.0	33.4	ı									36.7	0130	.0378
	i	_												-							
											 										
		-													_						
		-																			
AVERAGE STRESS	RESS			0.62	11.9	17.2	22.3	27.1	31.8										8.2	.0138	
STANDARD DEVIATION STRESS	TRESS			99.0	41.1	2	1.89	23	301										5.16	.00133	
AVERAGE STRESS-30				4.2	8 5	12.7	16.6	20.1	22.8						-	<u> </u>			19.7	8600	
																1	1	1			

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-17 REDUCED TEST DATA

NOMINAL PER PLY THICKNESS		NAREA		9050 .	.0307	P220	62230	E160.						
ER PLY		STRA	STRESS	.0156	/ē/0.	93 10.	810.	5319.				9810		
OMINAL P	0800	MAX	21 11 12 23	47.3	0.0	46.2	0.					47.5		
		g				 								
RESIN CONT.		920												
RESIN	26.98	9ZC.												
		.024						•						
Ö		220												
TEST COND.	FOR	020								·				
=	450P F FOR 30 MRN.	8 10.												
ي		910.	5				#2							
SPEC. CONDITIONING	DHAS.	\$10 .	STRESS - KS	0.0	42.5	41.0	41.0	43.1				41.5		
CONDI	460° F FOR 100 HAS.	.012		37.6	7	38.4	38.2	37.7				**		
SPEC.	500 F F	010		32.4	128	30.6	30.4	31.8				31.7		
		8		78	27.0	24.5	34.6	28.0				28.2		
CTION		98		20.3	20.8	18.6	19.2	20.0				10.0		
TEST DIRECT	8	ğ		13.2	14.6	12.7	13.1	13.7				13.4		
TES		200		07.2	07.5	8	8.8	0.70				3		
5.1	,		W(1)	789.	8	8	\$	700						
TYPE TEST	TENSION	z	τ(1)	280.	8	ğ	786	58					*	
7	F	IN./										TRES	STRE	
PANEL NO.	S/N S	STRAIN - IN./IN.	SPEC. NO.	8/N 5 - 30	8	V98	A78	116				AVERAGE STREM	STANDARD DEVIATION STRESS	AVERAGE STRESS-30

(A) COMPRENDMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRENS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRENDMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-18 REDUCED TEST DATA

PANEL NO	TYPE TEST	EST	F	EST DI	TEST DIRECTION	2	SPEC.	SPEC. CONDITIONING	TION	ي	F	TEST COND	9	_	RESIN CONT.	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
S/N 6	TENSION	Z		8			460°F	460°F FOR 100 HRS	H 88		460°F	460°F FOR 30 MINS	MINS		8.9%			900.	X	
STRAIN IN./IN.	IN./IN.		8	ğ	8	8	60	210.	410.	910.	610.	820.	220.	.024	920	920	020	MAX	STRAIN	AREA
SPEC.	(1)	W(1)]	STRESS - KS	9					1			_	STRESS	N.
8	990.	.407	6.90	10.8	15.0	21.2	24.2	ı										24.8	.0108	.0338
8	.068	904	96.5	10.0	14.5	18.9	21.3	1							-			21.4	.0100	.0380
8	.067	4	06.5	10.9	16.1	20.6	24.7	ı										26.1	9110.	.0330
1	.086	8	1.98	12.1	18.0	22.0	28.6	28.0	1								- ''	29.2	.0126	.0327
84	990	8	96.5	11.8	17.1	22.4	27.3	31.0	1						-		-	34.8	.0138	.0322
						-									-					
AVERAGE STRESS	TRESS		6.9	11.1	16.3	21.4	24.8										Ť	27.3	.0119	
STANDARD DEVIATION STRESS	STRESS																			
AVEPAGE STRESS-30																				

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-19 REDUCED TEST DATA

PANEL NO.	TYPE	TYPE TEST		TES	T DIR	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	ç	F	TEST COND	Š.		RESIN CONT	ONT.	Q.	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S./NB, S/N13	COMPRESSION	TESSIC	Z		0			1Hr •	-66°F			-86°F	-66°F For 30 Min	Min		26.0%			.0082/ply x 3;4	1 x 3;4	
STRAIN IN/IN.	IN./IN.		Ė	005	98	900	900	010	.012	P10 .	910.	810.	020	220.	.024	920.	920	020	MAX	STRAIN	AREA
SPEC. NO.	<u> </u>	T(1) W	w(1)						•	STRESS	9					1			2	STRESS	N.
S/N9 210	9.	.080	0.00	08.3	17.5	28.3	36.4	44.2	62.5	62.1	-								70.3	0160	990
122	.o.	. 770.	.750	12.3	23.4	33.0	42.5	61.1	8.4	1									70.7	.0130	.0677
724	9.	. 180	0 097.	08.2	16.5	25.6	33.8	42.0	50.0	67.6	4.98	75.8	1					-	80.0	38 10.	7080.
231	₽.	.083	.750	4.80	18.6	31.4	44.0	9.99	87.6	-									73.5	0133	.0623
236	8		.750	98.6	17.1	25.8	37.6	50.1	63.5	74.5	_								81.4	.0156	.0637
283			740	6.00	19.8	292	37.4	46.7	64.0	61.0	69.2	_							70.9	.0167	.000
266	5	180.	.750	≘ 1 .	19.0	28.8	37.8	47.8	6.83	67.5	76.9	1							78.0	.0166	.0807
258	5		748	09.2	17.4	26.9	34.3	42.8	61.0	60.0	8'90	ı							71.7	8710	8630
287	ē.	1.	748	8	17.5	26.4	34.4	62.9	51.1	69.3	66.7	ł							72.2	.0176	9090
260	5		.740	0.00	17.1	25.8	34.2	42.8	61.3	50.5	87.79	75.4	ı						76.5	0184	.0614
AVERAGE STRESS	RESS									DATA	DATA CONTINUED		NEX	ON NEXT PAGE	ш						
STANDARD DEVIATION STRESS	TRESS			·																	_
AVERAL STRESS-30																					
			1	1											1	1	1	1			1

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE
(I) CURVE IDEALIZED

DATA CONTINUED FROM PREVIOUS PAGE TABLE - AI-19 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	<u> </u>	TEST DIRECT	ECTION		SPEC.	SPEC. CONDITIONING TEST CO	SPEC. CONDITIONING	ō	=	TEST COND	Ž.	_	RESIN CONT.	CONT.	Ž	DANINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/ND, S/N13	COMPRESSION	MOIS		တ			114	-68°F			1 98 P	65°F For 30 Min	M in		26.0%			.0082/ply x 3/4	y x 3/4	
STRAIN IN/IN	N./IN.		.002	ş	900:	900	010.	210.	410.	910.	9.0	020	.022	10.024	920	920	980	MAX	STRAIN	AREA
SPEC. NO.	(E)_L	£							STRESS - KSI	2								31 4535	STRESS	N.
S/N13 210	.083	5. 26.	€ 8	26.0	39.2	62.0	50.0	6.49	,									8,88	.0123	.0623
220	870	.750	11.6	(1) 18.8	26.4	3,5 3,5 3,5 3,5 3,5 3,5 3,5 3,5 3,5 3,5	Ξ Ω	51.6										98.0	(1) AC (0.	.0685
223	.082	.750	11.6	22.0	30.8	39.2	47.7	56.6	64.5	,								98.0	8410.	6190.
237	.082	.740	11.6	22.5	32.6	42.0	51.0	58.7	,									61.5	.0128	.0614
283	.082	740	(1) 07.8	(1) 16.0	(1)	30.0	≘ ‡	≘ %	67.1	£ 0.0								80.5	(1) 0162	.0614
392	.082	.748	12.6	25.0	36.2	42.1	51.8	1.09	67.6									72.7	.0154	4190.
257	7807	.749	10.6	19.9	28.7	36.7	41.1	9.9	49.7	53.7	57.9	61.3	66.3	88.8	72.4	,		72.5	.0262	.0614
267	.084	.750	10.6	20.6	31.8	42.8	53.1	59.2	2 6.3	0.08	74.0	,					**	277	9610	.0630
270	780	740	13.0	26.0	3,.5	46.8	52.5	56.2	61.0	299	0.08	76.3	79.8	83.5	86.4			87.0	.0286	.0614
275	.083	.750	9'90	20.9	34.2	43.3	52.4	60.3	68.2	ļ								76.1	.0158	.0623
AVERAGE STRESS	ESS		10.2	20.1	30.0	39.7	47.9	56.3										73.2	0710.	
STANDARD DEVIATION STRESS	RESS		1.73	3.16	4.38	4.66	5.28	5.52										6.83	61400	
AVERAGE STRESS-3 O			5.0	10.6	16.9	7.22	28.	7.86										52.7	.0046	
							1	1	1	1	1	1	1	1	1	1				

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDE.ALIZED

TABLE - AI-20 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	TE	TEST DIRECTI	ECTION	2	SPEC.	CGND	SPEC. CONDITIONING	ပ္ခ	_ =	TEST COND.	Ö	<u> </u>	RESIN CONT.	CONT	ž	MINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
S/N8	COMPRESSION	SION		906			1 Hr	1 Hr	<u>u</u> .		-66°l	-66 ⁰ F For 30 Min) Min	-	26.0%			8700.		
STRAIN IN IN	N./.N.		.002	8	906	900	010.	210.	A10 .	910.	810.	.020	.022	.024	920.	820.	080	MAX	STRAIN	AREA
SPEC. NO.	T(1)	w(1)							STRESS - KSI	īŞ.									STRESS	Z.
192	.075	.750	10.6	27.4	40.8	53.9	9 99											70.6	.0109	.0663
193	970.	.750	10.5	22.8	1.22	41.0	50.0	59.4	0.99	-								66.9	.0142	0670
961	7.00.	750	12.6	23.0	32.2	40.7	48.7	56.7	64.1	_								9.39	>>10	77.90.
197	620.	.749	11.4	20.3	28.7	36.5	44.8	58.4	59.5	ı								66.0	9510.	.0692
200	.079	.750	98.4	17.71	28.2	35.4	44.7	52.4	0.09	ı								61.4	.0149	.0593
201	7987	.751	11.4	22.3	30.9	38.2	46.6	53.5	61.0	ı								61.3	.0142	.0615
283	.078	740	08.5	17.8	27.7	37.1	46.2	54.6	,									58.6	DE10	.0686
206	.078	748	10.3	19.7	28.2	37.7	46.9	54.6	61.7	ı								66.5	20154	0584
X17	970.	750	10.5	21.1	31.8	40.4	40.1	57.2										63.5	.0136	0670
GrX	.077	.740	12.3	23.4	33.8	42.5	51.2	1.09	ı	ı								63.3	£10.	9290
AVERAGE STRESS	ESS		10.6	21.6	31.3	40.3	40.3	1										64.2	.0140	
STANDARD DEVIATION STRESS	RESS		1.40	2.90	4.06	6.28	6.50											3.19	.00139	
AVERAGE STRESS-30			6.4	12.3	19.1	24.5	29.8											54.6	6600	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH FAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVENAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-21 REDUCED TEST DATA

-	TYPE TEST	ST	TE	TEST DIRECTI	ECTION	-	SPEC.	CONDI	CONDITIONING	و	16	TEST COND	9	-	RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNES
ğ	COMPRESSION	SION			00	<u></u> 86	95% RH @ 125 ⁰ F For 42 Days	9 125°F	For 42	Deys	-088 -088	- 46°F For 36. ⊁in	5.7		26.0%			8700.		
STRAIN IN./IN.	ž	ıL	200	8	900	800	J10.	210.	≱ 10.	910.	810.	020	220.	7 20.	920	820	030	MAX	STRAIN	AREA
	T(1)	(L)M							STRESS - KS	. KSI								3	STRESS	Z.
	003	.750	10.0	19.9	30.0	40.2	50.0	28.	5.93	2.3	68.2	72.5	76.3					877	.0232	.0623
	920.	.751	17.6	21.4	32.2	43.3	53.0	62.4	70.8	,								71.0	.0142	0694
	7.70	.751	08.8	19.1	28.2	37.6	46.7	78.	0.40	-								67.3	.0151	.0578
	920.	.750	09.5	19.8	31.2	42.1	51.5	61.0	68.7	ı								0.17	.0149	.0570
	7.00.	749	10.4	20.8	31.0	40.6	49.5	58.5	67.3	ı								8.07	.0150	.0576
	9/0	.749	(E) (S)	18.8	28.3	37.8	46.9	55.5	2.									72.3	.0152	.0569
	.075	.750	(E) 8760	20.1	30.0	40.7	8.8	58.0	9.99	74.5	,							984	.0174	.0663
	970.	.751	7:60	19.9	31.0	41.1	49.9	58. 8.6	67.2	75.3	,		<u> </u>					80.4	.9174	1750.
	.076	.751	9:60	20.2	29.8	39.4	0.69	57.3	85.5	73.6	81.8	1						81.5	.0183	1750.
	.076	.751	09.7	20.2	31.2	40.3	50.3	59.4	67.5	-								1.69	.0141	1 750.
AVERAGE STRESS	S		9.8	20.0	30.3	40.3	49.6	1.88	1.98									74.0	.0166	
RE	STANDARD DEVIATION STRESS		€.	37.	1.21	1.75	1.90	2.42	3.04					_				5.0.5	.00277	
Į			8.3	17.8	7.92	183	43.9	50.8	57.C									58.9	.0083	
								1		1		1	1	1	1	-	1			

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERACES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-22 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST		TEST DIRECT	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	ဋ	T.	TEST COND.	ŽD.	-	RESIN CONT.	ONT.	O _N	MINAL PE	R PLY T	NOMINAL PER PLY THICKNESS
S/N 8 CC	COMPRESSION	SION		900	0	8	95% RH @ 125 ⁰ F For 42 Days	125 ⁰ F	For 42	Days	38	86°F For 30 Min	30 Min		26.0%		-	0800	8	
STRAIN IN /IN	. /IN		.002	8	900	800	010.	.012	10.	910.	810.	020	.022	.024	920	820	020	MAX	STRAIN	AREA
SPEC NO.	(1)	W(1)							STRESS - KSI	9								200	STRESS	Z.
2	7.00.	740	09.2	19.2	28.6	37.4	88.5	1										52.6	2 010.	9290
▼	870.	.750	07.7	15.4	22.6	27.7	33.4	37.8	42.0	46.1	50.3	,						52.B	9610	3890
17	87.0	7.0	880	14.4	21.8	29.1	36.4	44.5	-									48.5	00.00	.0584
7	86. 48	7.	36.5	12.7	19.6	24.5	<i>L.1</i> 2	38.2	46.8	_								53.3	9510.	3236
88	86	7.00	7:90	13.2	19.6	26.4	33.0	39.6	1.8	52.5								9.33	0110	.0629
31	180	750	68.7	16.4	25.0	33.5	41.5	6.8										54.8	0130	5090
æ	080	.748	07.2	14.4	212	30.1	30.2	47.5	57.7	:			-		-			59.1	.0144	8090
37	180	7.60	8. 1.	18.8	28.8	38.6	46.7	26.0	1									57.3	.0123	9090
47	970	740	8	16.9	25.5	33.5	43.1	50.7	57.7	1								59.0	.0143	7890
82	970.	.740	1.68	19.3	34.4	48.8	56.8	63.9	_									66.0	.0173	.0692
AVERAGE STRESS	ESS		8.0	16.1	24.7	33.0	40.6											65.8	.0142	
STANDARD DEVIATION STRESS	1E.SS		85	.71	1.51	727	8.6											3	.00273	
AVERAGE STRESS-30			7.8	14.0	202	11.2	14.8											42.6	0900	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPCSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-23 REDUCED TEST DATA

STRAIN IN JIN 26.0% 265, RH # 125°F For 42 Days 25°F For 30 Min 26.0% 305 304 305 304 305	PANEL NO.	TYP	TYPE TEST	F	TES	T DIR	TEST DIRECTION	,	SPEC.	COND	SPEC. CONDITIONING	ي	=	TEST COND	ND.	<u> </u>	RESIN CONT.	CONT	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
V N N N N N N N N N	S/N 8	COS	RESSI	₹			Q_	55	5% RH	1250	F For 4	2 Deys	25°F	For 30	Min		26.	ž	-	8700.		
T(1) W(1) STRESS + KS1	STRAIN	N .			700	8	8	8	010	210	910	910	910	020	.022	.024	920	920		MAX	STRAIN	AREA
0.77 746 139 25.6 34.9 43.6 -	SPEC	<u> </u>		£ [1]] "	TRESS	.: K§						1		N HESS	STRESS	y. I≧
0.078 740 16.8 26.5 36.9 44.6 52.6 -	11			748	139	28.6	34.9	436	[i											8.0%	10094	7.290.
0.043 7.56 13.1 23.6 32.7 42.0 49.2 -	22	,		749	16.8	26.5	36.9	44.6	52.6											0.08	.0102	.0585
076 750 12.6 22.6 23.2 37.9 47.9 52.6 -	73	۳,		750	13.1	23.6	22.7	42.0	49.2	ı							·			50.9	£010.	.0623
078 749 09.6 17.9 26.1 34.4 42.1 47.4 51.5 —	74	٠,		750	12.6	22.6	32.2	37.9	47.9	52.6	1									56.3	.0136	0.0670
THESS 132 23.2 29.4 40.5 STRESS STRESS	8	٠,		749	9.60	17.9	26.1	34.4	1.2	47.4		ı				=				53.6	.0144	.0685
THESS 132 23.4 40.5 STRESS																						
THESS 13.2 23.2 32.4 40.5 STRESS																						
THESS 13.2 23.2 22.4 40.5 STRESS																						
THESS 13.2 23.2 22.4 40.5 STRESS																						
THESS 13.2 23.2 22.4 40.5 STRESS																						
STANDARD DEVIATION STRESS AVERAGE STRESS-3G	AVERAGE ST	RESS			13.2	23.2	32.4	£ 0.5												52.9	0116	
AVERAGE STRESS-3 J	STANDARD DEVIATION S	TRESS							I													
·	AVERAGE STRESS-30																					

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-24 REDUCED TEST DATA

10	, 			_	Υ		,			 T -	T	γ—	_		τ —
HICKNESS		AREA	N.	1290	9690	0090	2690	10624							
R PLY TI		STRAIN	STRESS	0103	0000	0163	.0003	.0146					7900.		
NOMINAL PER PLY THICKNESS	1900	MAX		43.6	42.8	7:98	43.9	62.5					43.7		
Ž		080													
DNT	×	820													
RESIN CONT.	26.0%	.026													
		₽20.													
O	Min	220													
TEST COND	25 ⁰ F For 30 Min	020											,		
TE	25°F	810													
	Days	910.	₹												
ONING	For 42	.014	STRESS - KE					50.7						-	
MOIT	125°F	. 210.	5					44.8 5							
SPEC. CONDITIONING	96% RH @ 125 ⁰ F For 42 Days	010		42.5				38.6							
75	78	900					.7								
Z		8		38.8	_	1	41.7	31.7	-						
RECTIC	.0 6	8		28.7	34.4	31.0	34.9	24.2					30.6		
TEST DIRECTION		8		19.4	26.6	24.1	27.4	16.3					22.8		
¥ 		700		9.60	16.9	14.6	17.8	8		=			12.4		
1 15	80		W(1)	.748	.748	.750	.748	.751							
TYPE TEST	COMPRESSION	ż	τ(1)	.083	.080	.080	970	.083					44	2	
۶	8	1.N.							-				TRES	STRE	
PANEL NO.	S/N 8	STRAIN IN IN	SPEC. NO.	23	88	\$	8	82					AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-8 J

FOOTWOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CUNVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES RUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-26 REDUCED TEST DATA

PANEL NO.	TYPE TEST	rest	-	EST DI	TEST DIRECTION	z	SPEC	COND	SPEC. CONDITIONING	ဋ		TEST COND.	ģ	<u> </u>	RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NB	COMPRESSION	SSION			00	6	5% RH	₽ 126°F	96% RH @ 125°F For 42 Days	Days		Æ			23.0%			7.000	"	
STRAIN IN./IN	IN./IN.		.00	§.	900	8	010	210.	410.	910.	810	020.	220.	.024	920	920	080	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)							STRESS - KS	<u>1</u> 2						1		200	STRESS	N.
176	785	192.	07.3	15.9	28.9	46.0	ı											50.2	6800	3190.
97.1	.078	3 .750	10.6	232	37.2	50.3	-											67.3	9800"	9890
180	7.40"	7 .750	14.7	30.2	44.0	56.4	ı											66.1	9800	9/90
186	7.00	750	C9.0	18.8	28.2	37.0	46.3	54.0	1									57.1	.0123	9750
187	7.00.	7 .750	08.5	18.1	27.3	36.4	44.7	53.0	ı									59.8	9610.	9/30.
191	.078	3 .748	11.6	28.2	36.E	46.3	53.8	ı							-			54.1	9 010'	0890
*	9.00	3 .750	3.5	20.8	31.6	412	49.5	67.9	ı									67.9	.0126	0290
rx.	7.00.	751	10.8	22.1	32.0	41.5	49.6	-										56.8	0118	.0679
X10	9.00	3 .748	10.7	21.6	34.1	46.5	57.5	_										58.9	9010	.0568
X14	.076	3 .752	10.7	24.0	34.1	46.7	54.0	1										54.8	9010.	1790.
AVERAGE STRESS	RESS		10.4	22.0	33.3	44.5												57.3	0109	
STANDARD DEVIATION STRESS	TRESS		1.96	4.04	4.98	6.26												0.4	.00170	
AVERAGE STRESS-3 O			4.5	6.6	16.4	26.7												41.3	.0068	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-26 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	F	TEST DIRECT	RECTION		SEC.	CONDI	SPEC. CONDITIONING	ā	1	TEST COND	è		RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NB	COMPRESSION	NOIS			906		96% RH @ 125 ⁰ F For 42 Days	₽ 126°	F For 4G	2 Days		RT			26.0%			8700.	æ	
STRAIN . IN./IN.	4./IN.		.002	8	900	900	010.	.012	\$10.	.016	810°	020	220.	20.	820	88	880	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	W(1)							STRESS - KON	5									STRESS	N.
z	8.	.740	082	16.4	24.5	31.2	34.5	36.2	38.8	40.6	42.5	44.1	45.8	-				47.0	.0236	6790
8	8.	7.	8.65	18.8	27.1	34.4	41.5	47.4	1									0.03	.0128	0180
3	8	92.	98.8	18.0	26.6	34.2	42.0	47.0	_									43.8	2210.	0090
8	.076	7.	13.8	24.8	34.2	42.8	١											46.3	0000	.0667
08	970	08	10.2	21.0	30.3	38.5	1											14.2	1000	0670
8	.076	8	8	17.9	26.3	35.0	42.6	1										8 .5	7110	0670
8	7.70	.751	10.5	19.2	28.2	37.4	46.8	1										0.	010	9790
100	970	.751	80.5	19.3	28.8	37.6	46.1	-										47.0	.0106	1.290
101	7.00	28	89	17.3	25.2	33.1	41.4	47.5	_									40. 3	.0136	8730
103	970	751	8	18.9	27.6	38.3	420	6.0	1									50.6	6210	1 /90"
AVERAGE STRESS	ESS		9.7	19.2	27.9	38.0												47.5	0126	
STANDARD DEVIATION STRESS	RESS		1.63	2.3	2.79	328												2.20	.00413	
AVERAGE STRESS-30			2	12.1	19.5	362												40.7	2000	

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPONTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECALISE OF COMPRESSONETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-27 REDUCED TEST DATA

Normal Normal Norman N	PANEL NO.	TYPE TEST	EST	"	TEST DIRECTION	ECTION	<u> </u>	SEC.	ONOS	SPEC. CONDITIONING	5	#	TEST COND.	و		RESIN CONT	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICF.NESS
AAIN IN I		OMPRES	MOIS			9		None				160	F For 3	N C	_	26.0			67.00.	2	
7.1 W 11 7.7 751 08.5 17.1 24.9 32.3 42.0 - 7.7 750 08.2 17.6 25.4 33.8 41.5 47.4 - 7.7 750 08.2 17.6 25.4 33.8 41.5 47.4 - 7.7 750 08.4 17.4 24.2 34.4 42.8 - 7.7 750 08.4 17.4 24.2 34.4 42.8 - 7.7 750 08.4 17.5 26.9 36.7 46.5 - 7.7 750 08.4 17.5 26.9 36.7 46.5 - 7.8 750 07.7 751 08.3 18.3 26.4 34.8 45.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 7.3 - 7.8 750 07.9 15.8 24.2 33.6 7.3 - 7.8 750 07.9 15.8 24.2 33.6 7.3 - 7.8 750 07.9 15.8 24.2 33.6 43.1 - 7.8 750 07.9 15.8 24.2 33.6 7.3 - 7.8 750 07.9 15.8 24.2 33.8 25.4 - 7.8 750 07.9 15.8 24.2 33.8 25.4 - 7.8		1./IN.		.002	8	900	900	010	210.	410.	910.	810.	020	.022	929	939	920	gg	MAX	STRAIN	AREA
177 751 185 175 254 323 415 474	SPEC.	1(1)							1 "	TRESS	9	1	1	1	1	1	1		O HESS	STRESS	N.
777 7.55 082 17.6 25.4 33.8 41.5 47.4 — 78	S/NB- 70	7.00.		6.89	17.1	L	32.3	0.2	-										46.4	.0120	67.30.
376 .751 08.8 20.0 29.0 37.8 —	9/	7.00.		097	17.6		33.8	41.5	47.4	1									9.6	00130	8790.
776	11	9.00		8.60			37.8	ı											40.6	3800	1730.
776 .749 08.4 17.4 24.2 34.4 42.8 -	87	900.		09.3	19.2		38.5	ı									-		44.6	£600°	0.0569
776 749 08.8 17.9 27.4 36.8 44.8 776 749 10.0 19.5 30.1 43.2 — 777 751 09.3 18.3 26.4 34.8 46.1 776 752 07.9 15.8 24.2 33.6 43.1	79	9.00		4.80	17.4		34.4	42.8	'								-		48.2	2010.	.0569
376 .749 10.0 19.5 30.1 43.2 — 376 .749 08.4 17.6 26.9 36.7 46.5 377 .751 09.3 18.3 26.4 34.8 46.1 376 .752 07.9 15.8 24.2 33.6 43.1	08	.076		08.8	17.9		36.8	8.4	52.4	ı									52.8	.0122	9950
776 .749 08.4 17.6 26.9 36.7 46.5 777 .751 09.3 18.3 26.4 34.8 46.1 776 .752 07.9 15.8 24.2 33.6 43.1	81	.076		10.0			432	1											50.0	2000	9990
777 .751 09.3 18.3 26.4 34.8 46.1 776 .752 07.9 15.8 24.2 33.6 43.1	28	920.		98.4	17.6		36.7	46.5	ı										47.0	.0102	.0569
376 .752 07.9 15.8 24.2 33.6 43.1	83	7.00.		09.3	18.3		34.8	1.9	1										49.3	7010.	67.30.
	28	900.		6.70	15.8		33.6	43.1	ı								-		47.2	9010.	1790.
STANDARD DEVIATION STRESS AVERAGE	AVERAGE STR	ESS							DATA	CONT	NUED	ON NE	KT PAG	ų,							
AVERAGE	STANDARD DEVIATION STI	RESS																			
	AVERAGE STRESS-30																+-				

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-27 REDUCED TEST DATA

TOTAL COMMENTS - THE COMMENTS OF THE COMMENTS

							6	MA CO	DNIL	ED FR	DATA CONTINUED FROM PREVIOUS PAGE	VIOUS	PAGE								
PANEL NO.	TYPE	TYPE TEST		TES	TEST DIRECT	ECTION	_	SPEC	CONDI	SPEC CONDITIONING	Q Q	16	TEST COND	Ö		RESIN CONT.	CONT.	ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NB,S/N13	COMPRESSION	RESSI	N.		8				None			160	160 ⁰ F For 30 Min	10 Min		26.9%	×			67.00.	
STRAIN IN IN	N / N			200	8	98	900	010.	.012	A10 .	910.	810.	020	.022	1024	920	920	080	MAX	STRAIN	AREA
SPEC	1	τ(1) ν	W(1)							STRESS - KSI	3								200	STRESS) <u>.</u>
S/N13-221	O.	0.79	.750	1.80	15.9	24.0	32.1	40.5	1										51.0	8110.	.0503
224	Q.	0.70	750	080	16.7	24.3	32.4	40.2	48.5	-									8.32	.0139	.0693
233	O.	188	.750	67.0	16.2	27.0	40.8	-								·			80.0	9900	0630
236	9.	.085	.750	670	14.6	22.6	31.1	37.7	42.4	46.7	ı								88 .3	.0152	.0637
536	o,	8	8	1.8	15.7	23.4	31.1	38.9	46.7	52.6	_								54.9	0146	.0630
241	o,	88	749	09.2	21.0	98.0	ı												46.5	2000	6690
244	- -	6.00	.760	1.	20.2	22.4	44.0	ı											52.2	8 60 0	.0693
258	0.	8	760	9.80	16.8	23.9	31.6	39.4	46.5	_									1.8	.0131	.080
5 99	o.	88	8	8.8	20.2	30.6	412	١											48.0	.0094	.0637
268	9	8	<u>%</u>	97.6	15.9	22.8	30.2	37.6	43.8	1									48.4	0130	0630
AVERAGE STRESS	TRESS			8.6	17.6	26.7					1								6.8	.0112	
STANDARD LEVIATION STRESS	STRESS			8	1.80	3.44													3.5	.00153	
AVERAGE STRESS-3 O				9	11.9	16.4													38.4	9900	
							}														

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-28 REDUCED TEST DATA

STRAIN IN / IN SOC COOK COO	PAMEL NO.	Ž	TVPE TEST		TEST	DAR	TEST DIRECTION	-	FEC.	ONO	SPEC. CONDITIONING	Ş	F	TEST COND.	9	_	RESIN CONT	CONT.	Ž	NOMINAL PER PLY THICKNESS	ER PLY TI	HICKNESS
Frank in /in W(1)	S/ME,S/N13	8	200	3		8				None			188	For 30	Z.		36.0	ž		2800	9	
Core T(1) W(1)		N / N		Ė	<u> </u>	├ ──	8	8	8	210.	210.	90.	950	020	220.	20.	820	828	g	MAX	STRAIN	AREA
. 076 .750 08.1 15.6 23.2 33.7 - 10.6 .751 07.0 14.4 22.5 29.4 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	MAC NO	1	$\overline{}$	Ę			1	1		1							1			SI MESS	STRESS	Z IŽ
264 .751 07.0 14.4 22.5 29.4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	- 2788	-			<u>s</u>	15.6	23.2	33.7	1											38.3	.0092	0.30
283 .749 068 13.5 19.3 24.8 3 283 .749 07.2 15.0 22.2 29.0 3 283 .751 06.4 12.5 17.8 23.6 3 283 .751 06.4 12.5 20.0 29.3 3 280 .753 06.0 12.0 17.9 24.9 3 282 .749 07.2 13.7 21.5 30.3 3 282 .749 07.0 14.3 20.5 27.3 3	•	9		\vdash	07.0	14.4	22.5	28.4	87	98	,									40.2	.0123	1630.
283 .746 07.2 15.0 22.2 29.0 3 283 .751 08.4 12.5 17.8 23.6 2 283 .751 08.4 12.5 20.0 29.3 - 280 .753 08.0 12.0 17.9 24.9 3 282 .746 07.2 13.7 21.5 30.3 3 282 .749 07.0 14.3 20.5 27.3 3	13	7			28	13.5	19.3	24.8	8	8	60.5	,								1.24	0146	2290
283 .751 06.4 12.5 17.8 23.6 2 283 .751 06.4 12.5 20.0 29.3 280 .753 06.0 12.0 17.9 24.9 2 282 .746 07.2 13.7 21.5 30.3 3 282 .749 07.0 14.3 20.5 27.3 3	¥	9			07.2	15.0	222	29.0	18	40.5	,									0'9	.0138	2290.
283 .751 084 12.5 20.0 29.3	17	9		_	1790	12.5	17.8	23.6	28.9	8	1									40.7	0410.	9290
383 .749 06.3 12.6 19.6 26.0 3 380 .753 06.0 12.0 17.9 24.9 3 382 .746 07.2 13.7 21.5 30.3 3 382 .749 07.0 14.3 20.5 27.3 3	8	-			98.4	12.5	200	29.3	ı											1.88	0010.	.0624
282 .746 07.2 13.7 21.5 30.3 3 282 .749 07.0 14.3 20.5 27.3 3	8	a				12.6	9.61	26.0	32.8	8.	,									40.0	0126	.0622
282 .748 07.2 13.7 21.5 30.3 3 3 205 .749 07.0 14.3 20.5 27.3 3	•	9			0.80	12.0	17.9	24.9	30.8	38.2	41.3	1								41.9	.0146	.0603
202 740 07.0 14.3 20.5 27.3 3	٥	a	-		07.2	13.7	21.5	30.3	38.7	1										40.1	.0110	.0614
	*	9						27.3	33,2	39.2	ı									43.4	.0134	3190.
STANDARD DEVIATION STRESS AVERAGE STRESS-30	AVERAGE ST	RESS				-			Ž	8	TINUEL	NOO	EXT P	ig ig								
AVERAGE STRESS-3 O	STANDARD DEVIATION S	TRESS																				
	AVERAGE STRESS-30																					

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRETS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

DATA CONTINUED FROM PREVIOUS PAGE TABLE - AI-28 REDUCED TEST DATA

When the second section is the second section of the second section of the second section of the second section sectio

PANEL NO.	1	TYPE TEST		TES	T DIR	TEST DIRECTION		9	DNO	SPEC CONDITIONING	SPEC CONDITIONING TEXT OF		TEST COND	2	ļ.	RESIN CONT	TNO	1 2	I ANIMO	FRPIVT	NOMINAL PER PLY YEAR
							+								+			+			
S/N 8, S/N 13	COM	COMPRESSION	8		900				NONE	.		180°	180 ⁰ F FOR 30 MIN	NIM OE		26.0%				.0082	
STRAIN	NI/ NI			700	700	900	98	010	210.	.014	910.	810.	020	220	.024	920	8Z0.	030	MAX	STRAIN	AREA
SPEC		(1) _T	W(1)							STRESS - KSI	5								3	STRESS	Z Z
S/N13-211		870	748	8,60	18.2	26.4	36.0	-											43.3	6600	.0583
214		080	.752	0.00	19.9	29.4	40.3	1											44.5	.0786	.ne02
217		180.	.750	12.2	21.8	30.0	1												42.7	0900	2090
246		080	.752	0.60	17.9	6 Œ	1												36.7	7900	.0802
240		-88	% %	07.4	14.3	20.7	17.12	36.1	1										42.2	.0107	2090
250		189.	.752	7.70	16.8	22.8	28.6	25.0	41.1	ı									42.5	.0125	6090
252		.082	.750	07.6	16.6	22.8	29.3	35.8	39.8	-									42.5	E10.	2190
267		180.	.750	680	16.8	24.4	32.0	39.5	1										44.5	9010	.0807
360		.083	.750	8.	16.7	26.2	33.7	41.1	- 1										46.4	.0114	.0623
264		28	750	9.80	16.5	242	31.7	39.2	ı										46.5	.0118	0630
AVERAGE STRESS	TRESS			8.70	15.6	23.2													42.0	-0114	
STANDARD DEVIATION STRESS	STRES	40		1.47	2.61	4.04													2.64	.00231	
AVERAGE STRESS-3 O				3.4	7.8	11.5													1.98	.0046	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-29 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	11	ST DIR	TEST DIRECTION	<u> </u>	SPEC	CONDI	SPEC. CONDITIONING	٥	=	TEST COND.	ģ	<u> </u>	RESIN CONT.	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NB	COMPRESSION	NOIS			g.	8	96% RH @ 125 ⁰ F For 42 Days	125°F	For 42	Days	160	160 ⁰ F For 10 Min	10 Min		26.0%	ود				
STRAIN . IN./IN.	IN./IN.		.002	8	900	900	010.	210.	\$10 .	910.	810.	.020	220	.024	920.	820.	020	MAX	STRAIN	AREA
SPEC NO.	(1)	W(1)						S	STRESS - KSI	.KSi								200	STRESS	¥. <u>¥</u>
63	7.00.	.748	12.5	22.6	32.2	40.7	ı											46.3	9800	3730
174	9.00	.750	10.0	22.8	33.9	45.3	_											47.3	3800	.0570
7.71	.080	740	13.0	25.2	33.4	1												37.6	.co	6650
181	.078	749	13.3	23.6	32.3	41.7	ı											42.3	.0083	.0685
184	.078	750	15.3	32.3	40.5													47.3	2200.	3890
188	.078	.750	09.2	17.6	26.1	33.8	41.7	1										44.4	0110	3890
Ø	.075	750	10.7	20.3	29.6	38.4	ı											45.4	9600	.0563
X5	.077	.749	17.8	32.6	45.1	-												48.7	.0062	.0677
82	920.	.750	18.4	29.5	35.8	41.5	1											42.3	3800	.0570
X11	770.	.750	22.0	36.7	41.1	45.0	_						-					45.4	2800	.0573
AVERAGE STRESS	RESS		14.2	26.3	36.0		S.											44.7	.0084	
STANDARD DEVIATION STRESS	TRESS		4.1	6.22	7.00													3.25	.00143	
AVERAGE STRESS-3 O			1.9	1.1	14.0													34.9	1900.	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-30 REDUCED TEST DATA

S/NB COMPRESSION STRAIN IN /IN SPEC T(1) W(1) 10 12 12 14 15 16 17 18 19 10 10 11 12 13 14 15 16 17 18 19 10 10 10 11 12 13 14 15 16 17 18 19 10 10 10 11 12 13 14 15 16 17 17 18 19 10 10 11 11 12 14 15 16 17 18 18 19 10 1	8 8 8 8	900 400		88	RH B	125°F	95% RH @ 125°F For 42 Days	1				+			-			
AIN IN/IN. T(1) W(1) 084 .749	.002 3.60 06.7	├ ──┤	_	-				2	1600	160 ⁰ F For :0 Min	Min (26.0%			.0082		
T(1) W(1) 084 .749 .084 .750	8.08.0		900	800	010	.012	.014	910.	810	020	022	.024	0. 920.	820	030 MA	MAX	STRAIN	AREA
.084 .750	6.90					S	STRESS - KSI	KSI							, 		STRESS	N.
.084 .750	7.90	17.2	23.9	29.9	35.8	1) 				-	36.2	7	.0104	.0629
	5	14.3	20.2	26.6	34.0	38.0									40.2	7	.0134	0630
18 .084 .749 0		68.3	12.9	18.1	22.6	28.3	34.0	_							88	(r)	.0160	.0629
21 .084 .749 0	0.70	12.7	19.6	26.8	33.4	39.2	1								41.5	r.	0130	.0629
24 .750 0	97.0	15.3	22.8	29.6	36.2	40.6						·			41.3	رب د	.0123	.06.su
27 .084 .749 0	2.9	1.9	1.61	25.5	31.8	37.7	_								38.4		00130	0629
34 .080 .750	07.3	14.0	22.3	31.0	38.7	1									39.8	æ	.0107	0090
38	08.3	17.3	24.0	30.0	37.0	42.5									43.2	7	.0124	0080
39 080. 98	7.88	17.5	25.6	33.6	40.0	-									40.7	7	2010	0090
C 64-C 670. 64-	37.4	15.2	23.0	30.4	37.8	-									40.3	6	9010.	.0632
AVERAGE STRESS 0	07.2	14.4	21.3	28.2	34.6				-						40.1	_	2210.	
STANDARD DEVIATION STRESS	1,63	2.86	3.63	4.26	4.86										1.08		77100.	
AVERAGE STRESS-3G	2.3	5.8	10.4	15.4	20.0										3		0700.	

FORTHOTES: (1) TO NEAREST .CO1"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES RUT DELETED FROM VERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

URVE IDEALIZED

TABLE -AI-31 REDUCED TEST DATA

Table Tabl	PANEL NO.	TYPE TEST	ST	TE	TEST DIRECTION	ECTION		SPEC. (CONDI	SPEC. CONDITICNING	2	TE	TEST COND	Ģ	_	RESIN CONT.	CONT.		NOMINAL PER PLY THICKNESS	ER PLY TH	HICKNESS
AAIN - IN /IN A		DAMPRES	NOIS		0			96% I	2 Days	28°F		ZZnºF	For 10	M.			8.0%		0080		
3	TRAIN . IN	NI/		.002		8	800.	0;0	.012	410.	910	810.	020	.022	.024	920	.028	.030	MAX	STRAIN	AREA
3		1(3)	W(1)						S	TRESS	ı. KS								0 HESS	STRESS	N. IZ
0 077 749 07.3 14.3 22.5 32.9	183	.078	.749	07.5	14.4	21.7	28.7	99.											40.0	9110.	.0585
2077 .748 07.8 14.4 20.8 49.2 36.5	061	7.70	749	07.3	14.3	40.0	32.9	;											41.9	6800	.0675
1 .084 .750 07.5 15.2 23.8 28.3 1	X12	7.00.	.748	8.70	14.4	20.8	29.2	36.5											38.4	7010.	9790.
084 750 092 19.1 30.4 36.2 39.0 41.9 44.8 47.2 1	z	8	.750	5.70	15.2	23.8	28.3	-											33.4	(1) .0096	2630
TRESS 07.9 15.5 23.8	234	8 6.	.750	09.2	19.1	30.4	36.2	39.0	41.9	44.8	47.2	1							0.6₩	9710.	0630
TRESS 07.9 15.5 23.8																					
TRESS 07.9 15.5 23.8																					
TRESS 07.9 15.5 23.8																					
TRESS 07.9 15.5 23.8 STRESS																					
TRESS 07.9 15.5 23.8 STRESS			1																		
NDARD NATION STRESS RAGE	RAGE STRE	8		670	15.5	23.8	31.1												40.5	6110.	
RAGE SS-3-J	PATION STR	IESS																			
	AVERAGE STRESS-30																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI-32 REDUCED TEST DATA

STRAIN IN /IN . SPEC. T(1) W(1) NO. 078 750 89 .076 .749 91 .076 .749 99 .076 .751	06.7	,		-													NOMINAL PER PLY INICKNESS
.078 .076 .076 .076	08.7	8			95% F	95% RH @ 125 ⁰ F For 43 Days	50 F		220°F	220 ⁰ F For 10 Min.	lia.	76.0%			900:		
7 (1) 870. 970. 970. 970.	06.7	.004	98	900	010	. 210.	.014	910.	810.	0.020	.022 .024	920.	.028	060	MAX	STABIN	AREA
870. 370. 370. 370.	06.7				1	2	STRESS - KSI	ž.				-			N HESS	S) 9ESS	
970. 870. 870.	09.3	13.7	20.4	26.8	33.4										34.5	.0106	.0585
370. 370.		17.4	23.8	29.8	,							_			31.5	0600	0.0670
670. 870.	07.2	24.2	21.0	27.4	-							-			30.7	1000	0570
9.00	8.80	17.4	24.2	31.6	1										34.6	0000	0570
	07.7	15.1	21.9	28.4	34.2	-									36.6	\$110 .	0670
					t						-						
										_	-	-					
										_							
AVERAGE STRESS	07.9	15.6	22.3	28.8		-				-	}				33.6	8	
STANDARD DEVIATION STRESS												<u></u>					
AVERAGE STRESS-3 J						-				-	 	-					

FOOTNOTES: (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-33 REDUCED TEST DATA

PANEL NO.	TYP	TYPE TEST	_	TES	T DIR	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	وِّو	F	TEST COND.	NO.		RESIN CONT.	ONT.	2	MINAL F	ER PLY TI	NOMINAL FER PLY THICKNESS
S/NB,S/N13	COMPRESSION	RESSI	8		ಹಿ			\$	100Hrs@400°F	90 100		400%	400 ⁰ F For 30 Mins	Mis		26.0%		_	0082		
STRAIN IN IN IN	· IN./in.			2002	9.	8	8	010.	210	5 0.	910	810	020	.022	.024	920	828	980	MAX	STRAIN	AREA
SPEC. NO.	<u> </u>	1,1	£,3							STRESS - KSI	KS							T	S HESS	STRESS) <u>z</u>
S/N 9 - 209	<u> </u>	080	.750	10.0	19.0	27.5													28.5	.0062	0090
219		. 770.	.740	6.80	18.3	26.3													33.8	8700.	.0575
223	٦,	.083	.750	07.2	14.5	22.3	7.62									 			35.0	3600.	.0622
122	-	. 770.	.750	7.80	18.0	25.7	1												31.2	.0075	.0576
233	,	.082	. 750	7.70	16.2	21.4	27.1	'											30.2	.0093	.0615
236	, 	.084	749	0.70	14.4	20.6	26.8	1											30.9	3600.	.0628
242	J .	.082	.750	08.0	17.8	22.4	27.7	ı											27.8	1800.	.0615
256	, 	.081	749	97.0	15.4	22.5	,												27.4	6200.	.0605
266	,	.083	749	9.70	15.0	22.2	1												26.4	0800	.0620
275	J.	.084	.751	07.1	16.7	26.2	1												27.4	9900:	.0631
AVERAGE STRESS	TRESS							8	50 ₹	MIN	DATA CONTINUED ON NEXT PAGE	MEXT P	AGE			<u> </u>					
STANDARD DEVIATION STRESS	STRESS																<u> </u>				
AVERAGE STRESS-30																	 				
			1	1	1			1	1	1	1				1			1			

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-33 REDUCED TEST DATA

DATA CONTINUED FROM PREVIOUS PAGE

								The continues of the first of the				3									
PANEL NO.	TYP	TYPE TEST	<u>,</u>	ŢĒ	TEST DIRECT	ECTION	z	SPEC.	COND	SPEC. CONDITIONING	NG	Τί	TEST COND.	ND.	_	RESIN CONT.	:ONT	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 9, S/N 13	COMP	COMPRESSION	NO		თ			Ď	O HRS	100 HRS @ 400 ⁰ F		400°F	FOR 3	400°F FOR 30 MINS		26.0%	¥			.0082	
STRAIN IN./IN	NI/NI			.002	900	900	800	010.	210.	\$10 .	910.	810.	020	.022	920	920	820	030	MAX	STRAIN	AREA
SPEC. NO.	_	τ(1)	W(1)							STRESS - KSI	IS .						1		31 11 23	STRESS	٠ <u>.</u>
S/N13-209		080	.750	3.60	15.5	22.2	_												27.4	7200.	0090
219		670	.751	8.80	16.4	23.4	ı												26.8	2000.	0090
727	•	080	.750	890	15.5	21.0	27.2	ı											30.8	0600	0090
231		.083	748	(E) 0.80	(1) 15.8	(1)	30.2	1											31.6	(1) .0084	.0620
234	-	88	.750	07.5	14.0	21.0	ı												26.4	<i>7</i> 200.	.0645
243		870.	.750	10.5	19.9	1.12	,												30.4	2900	.0586
18	•	.083	.750	7.80	19.2	27.0	ı												31.9	0700.	1290
260		8	.740	7.2	14.3		29.2	1											33.6	.0093	.0629
266	-	8	36	12.4	16.7	22	27.7	1											32.7	(1) .0089	0630
276		8	740	07.3	14.5	21.8	t												25.0	8900	.0620
AVERAGE STRESS	TRESS			8.4	16.4	23.4													28.8	6.000	.0620
STANDARD DEVIATION STRESS	STRES			1.44	1.86	2.39													303	150003	
AVERAGE STRESS-30				7	11.0	16.5													19.7	0.000	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETEN WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FUR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-34 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ESŢ	F	TEST DIRECTI	ECTION		SPEC.	SPEC. CONDITIONING	TIONIA	وِّو	F	TEST COND.	9		RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N8	COMPRESSION	NOIS		906			100 Hrs @ 400 ⁰ F	4000	u		400°F	400°F For 30 Min	Z i	_	26.0%		-			
STRAIN IN IN IN	IN./IN.		.002	96.	900	900	010.	.012	410.	910.	810.	020	.022	.024	.026	920	020	MAX	STRAIN	AREA
SPEC. NO.	(1)	W(1)						S	STRESS - KSI	123					1	1		200	STRESS	Z.
3	7.00.	.748	04.9	11.1	1											-		17.2	0900	.0676
9	.075	.750	12.6	•														18.9	.0034	0663
8	.084	.750	06.1	15.1	_													18.9	.0063	0630
11	.084	.750	06.5	11.4	17.3	_												19.1	7900.	0630
16	.083	.750	05.8	11.6	17.7	1												19.3	9900	.0623
19	.083	748	8	09.8	15.1	_												18.5	9200	1.290
25	.083	.750	04.2	06.2	7.60	13.5	6.21	19.1	1									19.2	.0138	.0623
90	.083	750	06.5	10.2	14.9	18.7	1											19.3	.0084	.0623
9	8 9.	.751	94.9	10.8	15.5	ı												19.7	6900	9090
43	.080	740	07.3	11.8	1													18.9	0900	.0599
AVERAGE STRESS	RESS		04.9															18.9	1 200	
STANDARD DEVIATION STRESS	TRESS		3.1															88	.00272	
AVERAGE STRESS-30																		16.8		

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-36 REDUCED TEST DATA

	1112	21	TĒ	ST DIR	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	و	16	TEST COND.	Š.	_	RESIN CONT	CONT	2	MINAL P	ER PLY T	NOMINAL PER PLY THICKNESS
S/NB, S/N9 COMP	COMPRESSION	NO.		ъ			<u>8</u>	100 HRS. @ 450°F	460°F			460 ⁰ F For 30 Min.	, j	_		26.9%	-	92.00		
STRAIN IN /IN	-		.002	8	8	3	010	210.	A10.	9;0	810.	020	220	1024	920		930	MAX	STRAIN	AREA
SPEC T	1(1)	W(1)						"	STRESS - KSI	2						1		SI KESS	AT MAX STRESS	
). 34 - 55 S.	. 770.	.750	7.70															15.3	0000	7790.
999 .	986	.740	10.0	-														12.5	.0027	.0562
S/N9 - 266	98	740	67.0	112	12.9	<												20.0	<	6690
2008	8	.750	4.85	1														12.3	0000	0090
0.02	8	7.8	09.2	ı														13.2	.0040	9090:
																			Ш	
				ij																
AVERAGE STRESS			08.6															14.7	.003 4	
STANDARD DEVIATION STRESS				-												-				
AVERAGE STRESS-3 O																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCLEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-36 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	TE	ST OIR	TEST DIRECTION	1/1=1/	SEC.	1040	SPEC. COPZHTIONING	و	1	TEST COND.	و	Ĺ	RESIN CONT.	ONT.	ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/NB	COMPRESSION	960 FS		906			8:	100 HRS. • 450°F	¥00₽			450° F For 30 Min.	<u>ي</u> ي		26.0%	ž			87.00.	
STRAIN IN /IN	21/2		.002	8	8	8	010	210.	-014	910.	8 10.	82	220	80	820	820	020	MAX	STRAIN	AREA
SPEC NO	13	(L) A						•	STRESS KS	3								3	STRESS	ž
2	<u>8</u> 3	5.	96.3	'							_							8.89	2000	9090
86 1	.03	58	8	11.3														1.4	.0042	.0593
202	.076	.740	06.1	11.9														15.4	9900.	6990
X-16	7.00.	750	07.2	ı														11.3	.0036	7,790.
X-18	3.00€	.750	9.90	11.3					-							-		12.6	86	0563
												 								
AVERAGE STRESS	IESS		6.1															11.9	.0042	
STANDARD DEVIATION STRESS	RESS																			
AVERAGE STRESS-30															,					
						1	1		1		1	1	1	1	1	1	1			

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

TABLE - AI-37 REDUCED TEST DATA

PANEL NO	7	TYPE TEST	15	<u> </u>	TEST DIRECTIO	ECTIO	z	SPEC	COND	SPEC. CONDITIONING	NG	1	TEST CC	COND		RESIN CONT	CONT.	Ž	NOMINAL P	PER PLY T	PLY THICKNESS
S/N 9, S/N 13	PAN	PANEL SHEAR	AR			06/0			NONE			65° F	65° F FOR 30 MIN	MIN		28.9%			0800		
STRAIN	NI/NI	-		8	900	210.	910.	020	120.	.028	2007	88	8	\$	9.	.062	990.	.080	MAX	STRAIN	AREA
SPEC. NO.		±(1)	(1) ^M							STRESS	3								201	STRESS	y. I≧
8/N 9 - 9	·	870	3.875	08.5	13.7	16.1	<												19.3		0.302
12		8	3.875	08.2	14.3	16.7	<												19.9	•	0.310
13		670	3.875	08.3	13.9	16.2	17.0	٧	•										18.7	∢	0.306
15	•	720	3.875	08.3	15.4	16.1	<	•											16.1	∢	0.298
Q	•	8	3.875	7:80	15.1	18.4	19.6	٧											20.5	<	0.310
8		88	3.875	08.0	14.2	18.1	20.4	21.6	22.5	<									24.2	∢	0.318
81	·	.07	3.876	8.	15.0	17.5	18.6	19.1	19.4	19.5	19.6	19.8	•						20.0	0.396	0.296
20		8/0	3.875	7.88	15.2	17.6	18.5	19.0	19.2	19.3	19.4	19.7	19.3	19.8	19.8	19.9	19.9	19.9	19.9	8090	0.302
z		28	3.875	07.2	12.9	16.2	17.6	18.5	19.0	19.4	19.5	19.7	19.9		20.0 TO	970	STRAIN		20.9	9180.	0.322
8	-	280	3.875	07.4	12.9	15.9	17.3	17.9	19.1	18.3	18.4	18.6	18.7	18.8	18.9	19.0	1.61	19.1	18.1	.0624	0.322
AVERAGE APPARENT STRESS	PARE	¥ '						8	DATA CO	CONTINUED	NC ON	NEXT	PAGE								
STANDARD DEVIATION APPARENT STRESS	DEVIA	Ş																			
AVERAGE APPARENT STRESS -30	PARE	FN																			
*(.38) × (AVERAGE STRESS)	RAGE	APPARENT	RENT																		
*(.88) × (AVERAGE STRESS - 3	RAGE	APPARENT	SENT																		

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPONTED FOR RECORDING PUMPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AI-37 REDUCED TEST DATA

DATA CONTINUED FROM PREVIOUS PAGE

PANEL NO.	TY	TYPE TEST	F	TES	T DAR	TEST DIRECTION	-	SPEC.	COND	SPEC. CONDITIONING	وٍ	=	TEST COND	N O	L	RESIN	RESIN CONT.		OMINAL	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 9, S/N 13	PANEL SHEAR	SHE I			8				MOM			1	-86°F FOR 30 MIN	NEW	-	28.0%	8			0800	
STRAIN . IN./IN.	N./N	_		ğ	8	.012	910.	928	ğ	8	g	ğ	8	3	8	8.	8	8	MAX	STRAIN	AREA
SPEC. NO.	-	10,1	E)M							STRESS	9]						STRESS	STRESS	N. 1≧
S/N 13 · 19	9	670	3.875	8.70	14.0	16.2	<												17.3	<	306.
31	9	920	3.875	07.0	13.2	16.2	17.4	«											17.9	<	306
8	0	080	3.876	07.3	12.4	16.2	18.6	20.4	4										25.4	<	.310
*	0,	280	3.875	07.5	13.4	17.2	19.1	20.2	20.6										21.1	.0272	.322
æ	0,	2	3.875	08.2	13.8	17.1	19.0	20.2											20.8	.0232	.326
85	o.	4	3.875	38.5	11.7	14.6	16.4	17.3	17.9	18.2	18.4	18.5							18.6	0070	326
		-																			
		_																			
AVERAGE APPARENT STRESS	PAREN	E		7.9	13.8	16.6	18.1	19.4	19.5										20.1	8740.	
STANDARD DEVIATION APPARENT STRESS	RESS	NO.		27.	1.11	8	1.19	1.38											2.3		
AVERAGE APPARENT STRESS - 30	PAREN	5		5.7	10.5	13.6	14.5	15.3											13.2		
*(.88) × (AVERAGE APPARENT STRESS!	RAGE A	APPAR	ENT	6.9	12.1	14.0	15.9	17.1											17.7		
*(.86) × (AVERAGE APPARENT STRESS · 3 ø)	AAGE A	PPAR	ENT	5.0	9.2	12.0	12.8	13.5											11.6		
			1	1					1	1	1				7	1			?	4	

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

ICI CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-38 REDUCED TEST DATA

PANEL NO.	TYPE	TYPE TEST		TES	T DIRE	TEST DIRECTION	_	S EC.	CONDI	SPEC. CONDITIONING	ទ	٢	TEST COND	ي و	L	RESIN CONT	CONT	Ž	NOMINAL P	PER PLY TI	THICKNESS
S/N 9, S/N 13	PANEL SHEAR	SHEA	Œ		06/0			_	NONE			25° F	F FOR 30 MIN	Z.		26.0%		-	0800		
STRAIN	IN./IN.		-	8	8	.912	910.	020	920	.028	283	8	ş	ş	8	790	8	090	MAX	STRAIN	AREA
SPEC. NO.	T(1)		w(1)						•	STRESS	iS.								200	STRESS	Z.
S/N 9 - 17	280		3.876 0	07.1	11.0	14.1	15.1	15.6											15.7	.0204	.318
61	.078		3.875	07.2	11.5	13.8	14.9	15.4	15.7	15.9	16.1	16.3	16.5						16.6	.0580	.0302
21	8 6.		3.875	8	8,8	14.2	15.4	16.5											16.5	.0204	322
82	28		3.875	6.8	11.6	14.0	14.8	16.3	15.7	15.9	16.0	16.0	16.0	16.2	16.2	16.3	16.3	16.3	16.4	.0648	.318
8	.08	$\overline{}$	3.875	07.3	13.1	16.2	17.7	18.4	18.9	19.2	·								19.3	.0294	.318
S/N 13 - 12	.070	-	3.875	07.5	12.6	14.7	15.6	16.0											17.2	0090	306.
13	.070		3.875 0	07.7	12.7	14.4	15.1	15.4	15.7	16.0	•								17.2	.0442	306
8	079	- 1	3.875 0	97.0	12.7	14.3	15.0	15.6											16.0	0320	306.
22	.082		3.875	38.5	13.1	14.7	15.9	16.4											16.4	0020	318
7	.074	$\neg \neg$	3.875 0	07.4	12.6	16.2	17.8	18.4	18.7	18.9									19.0	.0292	782.
AVERAGE APPARENT STRESS	PARENT			7.2	12.1	14.3	15.7	16.3											17.0	7850.	
STANDARD DEVIATION APPARENT STRESS	EVIATIC RESS	¥.		96	1.06	8,	1.12	1.18											1.24		
AVERAGE APPARENT STRESS -30	PARENT			4.4	9.0	11.4	12.3	12.8											13.3		
*(.88) × (AVERAGE STRESS)	RAGE A	APPARENT	F	6.3	10.6	12.6	13.8	14.3											16.0		
•(.88) × (AVERAGE STRESS - 3	SAGE A	APPARENT	5	3.5	7.8	10.0	10.8	11.3											11.7		

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-39 REDUCED TEST DATA

PANEL NO.	TYPE TEST	TEST		TEST	DIR	TEST DIRECTION	_	SPEC.	COND	SPEC. CONDITIONING	NG	F	TEST COND.	Š.		RESIA	RESIN CONT.		OMINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 6, S/N 8 S/N 13, S/N 9	PANEL SHEAR	SHEA	æ	Ó	06/0			NONE					7		-	28.0%			.0082		
STRAIN IN /IN	IN./IN.		o.	200	900	210.	910.	020	.024	820.	.032	88	960	8	8	.052	986	8	MAX	STRAIN	AREA
SPEC.	(I) _T		(L) ^M	1						STRESS - KSI	. K								200	STRESS	N.
S/N 13 - 15	670.		3.875 07	07.2	11.8	14.1	<										ļ 		16.5	٨	306
23	.085		3.875 00	08.6	11.0	12.7	٧												14.1	∢	.328
82	.082		3.875 00	8.8	11.4	14.4	٧	•											18.7	4	.318
27	86		2.875 07	07.5	11.9	13.6	1												14.2	∢	418.
10	080	\rightarrow	3.875 0	0.70	1.4	13.1	4												15.5	∢	.310
8	88		3.875 0	07.3	12.3	14.9	٨												17.1	∢	.322
37	.082		3.875 0	07.6	13.0	15.5	<	·											17.8	∢ ′	.318
8	8 .		3.875 00	4.90	10.5	13.0	٨	•											16.0	4	.325
11	.883		3.875 0	07.2	11.6	13.2	4	•											13.8	«	.322
53	280		3.875 00	6.90	11.3	<	Ţ												14.1	∢	.318
AVERAGE APPARENT STRESS	PARENT		L	-				DATA	A CON	TINUE	CONTINUED ON NEXT PAGE	EXT P.	AGE				_				
STANDARD DEVIATION APPARENT STRESS	RESS	NO.																			
AVERAGE APPARENT STRESS -30	PARENT																				
*(.88) × (AVERAGE APPARENT STRESS)	RAGE AP	PARE	TN														<u> </u>				
• (.88) × (AVER STRE	(AVERAGE APPARENT STRESS - 3 0)	PARE	L								L						_				
				1	1	1															

(A) COMPRESSOMETER WAS SI-UT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR N≅CORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-39 REDUCED TEST DATA DATA CONTIN' JED FROM PREVIOUS PAGE

PANEL NO.	TYPE TEST	EST	-	TEST DIRECT	ECTION	2	SPEC.	COND	CONDITIONING	ပ္	=	TEST COND	وَ		RESIN CONT.	ONT.	ž	NOMINAL P	PER PLY TH	THICKNESS
S/N 5, S/N 8 S/N 13, S/N 9	PANEL SHEAR	IEAR		06/0				NONE				7			26.0%	*	-		.0082	
NI/NI · NIVILIS	./IN.		18 0	900	210.	910.	.020	.024	.028	260.	969	8	ş	8	.052	98	090	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)						S	STRESS	. itSi						1		200	STRESS	Z.
8/N 5 - 4	.067	3.875	06.2	10.6	12.8	13.5	-						<u> </u>					14.0	.0218	0.260
7	.062	3.875	1.80	12.2	13.4	14.0	14.2	14.3	14.4									14.5	9000	0.240
7.8	.067	3.875	4.90	10.9	13.2	4.4	15.2	15.3	15.5	•								15.5	.0320	0.260
8A	980.	3.875	9.90	11.7	13.6	14.6	15.2	15.5	15.8	·								15.9	.0298	0.256
2	980	3.875	07.9	12.3	13.8	14.6	14.9											15.1	.0214	0.256
96 - 9 N/S	.082	3.875	4.9	11.4	14.1	15.6	16.7	17.2	17.5	·								18.0	0000	0.318
37	8 6.	3.875	7.70	12.6	15.2	16.3							1		· · · · · ·			17.4	2710.	0.326
8	86.	3.875	9.90	12.5	14.4	5.3	15.5		•	-								15.5	.0200	0.310
8	9. 28	3.875	9.90	11.0	12.9	4.4	15.0	·										15.3	.0240	0.318
S/N 8 - 7	.078	3.875	8.90	12.1	15.6	17.4	18.6	٠					1					19.2	0520	0.306
AVERAGE APPARENT STRESS	RENT		6.90	11.7	13.9	15.0												16.0	.0252	
STANDARD DEVIATION APPARENT STRESS	VIATION		0.52	0.66	0.90	1.16												29.	91300.	
AVERAGE APPARENT STRESS - 30	NRENT		4.3	9.6	11.2	11.5												11.1	7800.	
*(.88) × (AVERAGE APPARENT STRESS)	GE APP	ARENT	5.5	10.3	12.2	13.2							-					14.1	.972	
*(.88) × (AVERAGE APPARENT STRESS - 30)	GE APP.	ARENT	3.7	8.4	9.9	10.1												9.7	276.	
														1						

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPE()
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AI-40 REDUCED TEST DATA

[s	T	_						·	-		Γ			_	T	T	Τ_	
HICKNES		AREA	N. N.	310	.322	.322	322	.310	325.	318	.318	310	310					
R PLY TI		STRAIN	STRESS	<	٧	4	∢	٨	<	<	.≪	«	4					
NOMINAL PER PLY THICKNESS	1800.	MAX		13.2	15.0	14.4	14.4	12.7	13.6	13.9	13.9	12.8	12.7					
2		980								_								
NT.		98	1													-		-
RESIN CONT.	26.0%	.062	1												 	-	ļ	-
36	26	880	1	-										\vdash	ļ			\vdash
	ž	24.0	-						-						-		-	-
TEST COND.	160° F FOR 30 MIN		1	-											-	-	-	
TEST	F FO	9.	-											CONTINUED ON NEXT PAGE	_	-	} 	-
_	160	88		-										N NEX		ļ	_	ļ
S		.032	S KS											UED O				
SPEC. CONDITIONING	 	.028	STRESS											NITNO				
COND	NONE	.024					3 .							DATA CO				
SPEC.		.020				Ą					٧			٥				
z		910		∢	∢	12.2	<	4	•	<	12.5	4	<					
ECTIO		210.		11.2	10.9	10.6	10.8	10.7	10.7	11.1	11.2	10.6	10.5					
TEST DIRECTIO	06/0	800		09.5	08.8	03.7	8.80	09.5	5.80	0.60	0.50	09.3	3,3					
1 1 1 2		Ş.		96.9	99.4	96.2	4.90	6.39	05.1	06.5	4.6	68.7	0.90]			
<u>+-</u>	AR		(1)^A	3.875	3.875	3.875	3.875	3.875	3.875	3.8751	3.875	3.875	3.875					
TYPE TEST	PANEL SHEAR	z	(c) ₁	080	580	.083		0.0	8.90	.082	280	88	080	F N	NOIL	L		
4	PAN	12./IN.					لنـــ. ا			•			,	PARE	DEVIA	PPARE	AGE	
PANEL NO.	S/N 9, S/N 13	STRAIN	SPEC. NO.	S/N 13 - 9	21	24	28	9!	9	4	42	7	18	AVERAGE APPARENT STRESS	STANDARD DEVIATION APPARENT STRESS	AVERAGE APPARENT STRESS-30	* .88 × AVERAGE	•.88 × 3 ⊄

FOOTNOTES: (1) TO KEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) LURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM
AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AL40 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

PANEL NO.	1 7	TYPE TEST	ST	i L	TEST DIRECTI		N O	SPEC. CONDITIO	COND	CONDITIONING		TEST CC	TEST COND	9	_	RESIN CONT	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
S/N 9, S/N 13	PANE	PANEL SHEAR	EAR		03/0				NONE	¥		160	160°F FOR 30 MIN	NIM OF		26.0%	×			1900.	
STRAIN IN/IN	NI/NI	نو و		8	806.	210.	910.	.020	.024	820.	.032	8	8	3	8	298	986	98	MAX	STRAIN	AREA
SPEC.		1(1)	(1)							STRESS - KSI	: KSt			1					31 HE33	STRESS	I <u>r</u>
S/N 9 · 31		180	3.875	05.4	08.8	10.5	11.4	12.1	<										12.7	4	.314
32	-	180	3.875	06.2	10.1	12.5	<												16.1	4	.314
41	-,	080	3.875	05.3	08.7	10.7	11.9	12.7	12.9	13.2	*								13.8	4	.310
42	-,	.88:	3.875	06.9	4.60	11.4	∢												12.6	<	.314
10		080	3.875	05.7	6.80	10.5	11.4	11.9	<										12.6	∢	.310
16		.077	3.875	9.90	1.	11.0	11.9	12.6	12.9	<									13.1	<	.298
72		180	3.875	05.2	4.8	10.2	11.1	11.8	12.1	<									12.5	<	.314
28		280	3.875	02.0	6.70	98	€0.	11.0	4										12.9	<	318
8		180	3.875	05.0	08.5	10.4	11.6	12.3	<										12.8	∢	.314
33		.082	3.875	05.6	10.2	12.4	၁							-					15.4	ပ	.318
AVERAGE APPARENT STRESS	PARE	TN		5.5	0.6	11.91	11.44	12.1	12.6										13.4		
STANDARD DEVIATION APPARENT STRESS	DEVIA	TION		.35	28	88	8												1.28		
AVERAGE APPARENT STRESS-30	PPARE	LN.		4.4	7.3	8.9	9.1												9.6		
* .88 × AVERAGE	AGE			4.8	7.9	9.6	10.1	10.6	11.1					_					11.8		
*.88×30				3.9	6.4	7.8	8.8												8.6		
																	1	1			

(A) COMPRESSOMETER WAS JHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELLTED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED
• THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

	STRAIN GAGE FACTOR: 2.10/2.08 STRAIN GAGE RESISTANCE: 350 /120	I: S-400-2AB	3 A A A A			5140 LBS CUTOFF					4970 LBS CUTOFF								
	RAIN GAGE F RAIN GAGE R	EXTENSOMETER: S-400-2AB	MODULUS	(PSI)															
NON TESTS	5 b	ũ	POISONS	(#)	-	0111.	.1060	.1000	7080	.0813		.1020	.1034	.1010	.0895	.0832	٠		
POISSONS RATIO FROM TENSION TESTS	É		STRAIN	(IN./IN.)	1	.0027	9900:	.07.83	.0113	.0140	1	0000	8500:	7900.	.0118	.0137			
NS RATIO	FILA. ORIENT.	00	STRAIN	(IN./IN.)	_	0000000	.000584	.000832	.001024	.001138	_	900000	009000	.000860	.001056	.001140			
	_	*	STRESS	(KSI)	0	10	20	0Є	40	48.2	0	10	20	30	40	45.2			
TABLE AI-41	RESIN CONT.	26.0%	ГОАБ	(LBS.)	0	1021	2042	3063	4084	4920	0	1039	2078	3117	4156	4690			
1	PANEL	6N/S	AREA	(SQ. IN.)	.1021						.1039								
1		"	THICK	(IN.)	.082						.083								
	FICATION:		HTOW	(IN.)	1.252						1.251								
	DATE: 11-17-68 MATERIAL IDENTIFICATION:		TEST		ВТ						RT								
	DATE: MATERI		86 C		S/N9 - 45						S/N9 - 46								

	STRAIN GAGE FACTOR: 2.10/2.08 STRAIN GAGE RESISTANCE:360 /120	l: S-400-2AB	REMARKS	5980 LBS CUTOFF												
	RAIN GAGE F	EXTENSOMETER: S-400-2AB	MODULUS E x 10 (PSI)													
rests	r r	û	POISON'S RATIO	1	.1830	.1610	.1160	.0965	.0875	.0820						
E - AI-42 POISSONS RATIO FROM TENSION TESTS	Ť.		STRAIN LONG. (IN./IN.)	_	9100.	.0042	.0073	3 010.	.0132	.0148						
ATIO FRO	FILA. ORIENT.	00	STRAIN TRANS.	-	.000348	.000678	058000	.000892	951100	.001222						
OISSONS R	CONT.	*	STRESS (KSI)	0	10	20	30	40	90	56.1			<u> </u>			
AI-42 P	RESIN CONT.	26.0%	(LBS.)	0	1060	2100	3150	4200	5250	2780						
TABLE	PANEL	S/N13	AREA (SQ. IN.)	.1050							11					
	=	0 ,	THICK (IN.)	8												
	FICATION:		WIDTH (IN.)	1.248												
	DATE: 11-17-68 MATERIAL IDENTIFICATION:		TEST COND.	RT												
	DATE: MATERI		SPEC IDEN.	S/N13 - 25												

	STRAIN GAGE FACTOR: 2.10 STRAIN GAGE RESISTANCE: 360	:: \$-400-2A8		REMARKS		4460 LBS CUTOFF						6250 LBS CUTOFF							
	RAIN GAGE F RAIN GAGE R	EXTENSOMETER: S-400-2AB		MODULUS	(SE)		i												
TESTS	13	Ä		POISONS	3	-	.1350	.1236	.0875	.0817	.0745	-	3660:	9960	.0873	.0844			
POISSONS RATIO FROM TENSION TESTS	Ę.	ļ		STRAIN	(IN //N)	1	.0025	.0060	1900.	.0114	.0132	ı	.0032	1900.	.0105	.0125			
ATIO FRO	FILA. ORIENT.	96		STRAIN	(NI/NI)	_	9000396	819000	964000	.000832	788000	_	815000.	209000	916000	₩90100			
OISSONS			•	STRESS	(ICSI)	0	10	20	90	40	44.3	0	10	20	30	39.1			
	RESIN CONT.	26.0%		LOAD	(LBS.)	0	975	1950	2925	3900	4310	O	1011	2022	3033	3960			
TABLE - AI-43	PANEL	6N/S	<u>-</u>	AREA	(SQ. IN.)	3760						.1011							
ı				THICK	(IN.)	870.						.081							
	FICATION:			WIDTH	(IN.)	1.250						1.250							
	DATE: 11-14-68 MATERIAL IDENTIFICATION:			TEST COND.		н						RT							
	DATE: .			SPEC IDEN.		S/N9 - 28						S/N9 - 38							

TABLE - AII-1 REDUCED TEST DATA

PANEL NO. TY	TYPE TEST	ST	TE	TEST DIRECTI	ECTION	7	SPEC.	CONDITIONING	TIONI	S S	118	TEST COND	ξĎ.	<u>.</u>	RESIN CONT	ON.	JK.	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
1	TENSION	z		တ			-86° F	F FOR 1	H.		959 F	F FOR 30	30 MIN.		31.0%			9600		
STRAIN IN/IN	ž		200	8	900	900	010	.012	410.	910	810	020	022	.024	920	820	030	MAX	STRAIN	AREA
SPEC. NO.	Ē	(L) A	415						STRESS	. KSI									STRESS	Z.
	760	486	1.80	16.6	21.2	27.0	(1)	(1)	(1) 43.9	(1) 40.5	(1)	(1)	(1)	(1)	(1)			81.0	9720.	.0481
	98 .	984	08.3	16.6	21.2 ′	26.8	32.7	38.4	44.0	50.0	56.9	61.6	6.99	72.5	77.5	82.7	87.0	86.3	.0314	.0471
	86	8	08.2	15.6	20.4	26.7	30.9	36.8	42.2	47.7	53.5	58.6	63.8	0.69	74.0	79.2		81.6	0620	.0486
	989	984.	68.5	17.0	21.2	26.8	32.5	38.2	43.7	50.0	56.6	58.9	66.5	72.1	0.77	82.8	88.0	89.7	0310	1710.
	980	98	4.8	18.6	23.2	28.9	36.2	42.3	40.3	56.1	63.1	70.0	76.4	82.3	88.0	98.7	,	94.3	.0290	.0426
	780	964	08.3	16.2	20.6	26.0	31.6	37.4	43.0	48.8	54.4	59.3	0.99	70.6	76.0	81.0	85.3	86.5	£0£0.	1890.
	98	964	07.2	15.0	19.9	24.6	30.4	36.0	41.5	46.8	52.5	87.8	62.7	0.88	73.5	78.0		81.2	0283	9890
	780.	98	07.3	15.2	19.7	25.6	31.2	37.0	42.6	47.8	5.0	50.6	0.98	70.6	76.4	,		79.5	.0272	.0481
	98	.483	07.5	16.0	20.8	26.3	32.0	38.5	43.8	40.6	55.6	61.0	66.4	72.5	77.5	83.2		87.0	0000	.0468
	8	196	6.89	17.1	21.7	27.3	33.6	39.2	45.5	51.0	56.9	62.6	68.3	73.8	79.0	83.5		84.4	2820	1946.
AVERAGE STRESS	S		8.2	16.4	21.0	26.5	32.2	38.2	44.0	49.7	9.99	61.0	66.7	72.2	8.77		,	86.2	£820°	
STANDARD DEVIATION STRESS	SS		97.	1.06	1.01	1.6	1.42	1.78	2.18	2.57	2.82	3.40	3.30	38	6			4.68	.00139	
AVERAGE STRESS-30			5.9	13.2	18.0	23.0	27.9	33.0	37.5	42.0	8.8	50.5	0.72	80.6	86.6			71.2	1920.	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-2 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	<u> </u>	TEST DIRECT	RECTION	2	SPEC.	COND	CONDITIGNING	٥	16	TEST COND	Q	L	RESIN CONT	TNO	Ž	NOMINAL P	PER PLY TH	PLY THICKNESS
S/N 11	TENSION	NC		906		-	. 68° F	F FOR 1	E		86° F.	FOR 30 MINS	MINS		31.0%			8900		
STRAIN IN	NI/N		005	8	900:	800	010	210.	.014	.010.	810	020	022	920	920	920	030	MAX	STRAIN	AREA
SPEC. NO	T(1)	W(1)							STRESS - KSI	KSI	1	1			1				STRESS	Z.
S/N 11 - 177	980	.510	08.3	15.3	20.1	25.4	30.6	36.0	41.5	46.5	51.9	U						17.71	ပ	.0434
185	98	96	1.88	15.2	19.7	25.2	30.9	36.2	41.5	46.3	52.0	57.0	62.2	67.7	72.5			77.0	8720.	.0421
189	680	.512	08.6	14.7	19.1	24.2	29.2	34.1	33.6	44.0	48.0	54.0	59.5	63.9	69.0			73.5	8720.	.0455
M-2	88	.496	0.80	15.2	21.8	27.3	32.6	38.1	43.6	49.4	54.0	59.7	64.3					68.8	.0238	.0436
M-3	080	.497	07.1	13.6	20.1	27.0	33.1	39.0	46.0	48.7	55.0	59.1	64.5					0.99	9220	.0423
M-4	.089	496	96.8	12.4	18.8	24.8	30.6	.36.2	41.9	46.4	51.5	56.1	50.4	•				63.1	.0234	.0442
138	680	\$	1.60	15.9	20.9	26.2	31.8	37.0	42.0	47.7	53.5	58.6	63.6	69.3	,			7.27	.0249	0440
139	680	<u>\$</u>	08.0	15.9	20.4	25.9	31.4	36.8	42.0	47.7	52.5	57.9	63.6					68.7	024L	0440
140	8	6 4.	08.2	14.8	19.3	25.0	29.5	34.5	39.8	45.0	49.7	54.4	59.5					62.4	0232	24
146	.088	495	6.80	14.9	20.0	26.1	30.9	36.8	42.4	47.7	53.6	59.0	64.3	69.2				911	.0249	96.36
AVERAGE STRESS	ESS		8.1	14.8	20.0	25.7	31.1	36.5	41.9	47.0	52.3	57.3	62.4					70.0	.0250	
STANDARD DEVIATION STRESS	RESS		.72	1.06	68	88:	1.23	1.47	1.59	1.78	1.88	1.97	8					5.24	01200	
AVERAGE STRESS-3 O			5.9	11.6	17.3	22.8	27.4	32.2	37.1	8.1.8	46.7	51.4	4.05					54.3	.0187	
																	1			

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - All-3 REDUCED TEST DATA

IICKNESS		AREA	≧	1040	7120.	900	96.36	00	41.80	.0424	.0425	.0424	9. 16.9			
NOMINAL PER PLY THICKNESS		STRAIN	STRESS	.0266	.0260	.0264	.0240	2720.	9920	.0280	.0252	9620	.0247			
OMINAL P	9800	MAX	2014	87.5	83.0	1.78	72.5	89.5	83.4	84.7	79.5	78.4	76.3			
Z		030														
CONT		820										9.77				
RESIN CONT	31.0%	920		1.78		86.2		87.3	82.0	82.5		77.5	•			
_		024		81.0	77.5	80.8	•	81.3	77.0	8.94	76.5	75.5	74.3			
Š	O MINS	.022		75.5	71.9	75.0	68.5	75.0	71.3	71.1	71.3	70.9	69.2			
TI ST COND	F FOR 30 MINS.	020		69.0	66.0	0.69	63.1	69.3	65.5	65.5	86.6	66.2	63.5	PAGE		
F	-65° F	810	1	63.5	60.2	62.5	57.4	63.4	50.2	59.9	60.0	56.7	67.9	NEXT		
و		910	· KSI	57.5	54.0	56.1	51.5	57.2	53.9	540	54.1	53.6	52.1	JED ON		
SPEC. CONDITIONING	50 F S	A10.	STRESS	50.4	48.0	49.7	45.9	0.۲	47.8	47.5	47.9	47.5	46.3	CONTINUED ON		
COND	96% RH @ 125⁰ FOR 42 DAYS	012		43.6	413	43.4	39.6	43.7	41.8	41.3	41.2	41.3	40.3	DATA C		
SPEC	96% P	010		37.4	35.0	38.9	33.8	37.4	38.0	36.4	36.3	8.4	34.6	-6-		
-		8		31.0	29.0	30.8	28.2	31.3	29.8	29.5	29.4	29.5	28.8			
TEST DIRECTION		8		24.7	23.2	24.9	23.0	26.2	24.2	23.6	23.R	23.6	23.5			
T DIR	8	ğ		18.7	17.8	19.2	16.5	19.5	18.2	17.7	17.9	17.71	17.3			
7.6.5		200	İ	8.4	0.0	8.9	080	10.5	6.7	4.40	4.60	9.0	09.2			
	2		W(1)	8	70	8	.406	487	189	.403	ş	.803	.493			
TYPE TEST	TENSION	z	1(1)	186.	8	280	880	280	88	980	88	8	.088	s	S	,
F	-	NI. AI												STRES	STRE	L
PANEL NO	S/N 7, S/N 11 S/N 7 IV A	STRAIN	SPEC	S/N 11 - 119	127	129	131	133	28.	144	146	148	150	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-3 O

FOOTNOTES: (1) TO NEAREST ,001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE EDEALIZED

TABLE - AII-3 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

PANEL NO. TY	TYPE TEST	ST	TE	TEST DIRECT	ECTION	2	SPEC.	COND	CONDITIONING	٥	11	TEST COND	NO.	_	RESIN CONT	ONT.	<u>×</u>	NOMINAL P	PER PLY TH	THICKNESS
S/N 7, S/N 11 S/N 7 IV A	TENSION	z		&	· 	8 i,	BEK RH & 125° FOR 42 DAYS	125°	<u></u>		38.8	-66° F FOR 30 MIN.	ec (31.0%	*	9.	9800		
STRAIL IN /IN.	ž		200	8	90	900	010.	210.	10.	910.	810.	020	.022	920	920.	920	030	MAX	STRAIN	AREA
SPEC.	τ(1)	W(1)							STRESS	5									STRESS	Ž
S/N 7 IV A -84	.072	169.	1.60	17.0	24.1	29.5	34.8	40.8	46.8	52.7	58.4	64.0	၁					87.0	ပ	.0363
87	8	.462	08.9	17.7	25.1	29.8	36.0	41.5	47.5	53.7	59.6	68.2	71.4	0.77	82.8	87.4		90.0	0300	.0339
91	.968	.403	08.7	17.6	24.5	29.8	36.8	41.8	47.8	83.8	0.09	66.7	71.6					74.0	0520	.0336
8	.068	ş	08.9	17.8	26.3	29.8	36.0	42.3	0.00	56.0	61.0	67.0	72.9	78.9	78.3	83.4		84.0	89 20'	9520
8	8	8	08.8	17.5	24.8	30.6	36.2	42.3	48.7	54.3	60.5	67.1	72.6	77.4	81.6			84.0	.0280	.0343
90.	.076	8	8.80	16.5	24.0	28.8	33.5	38.4	46.0	50.5	55.9	61.2	66.5	72.1	76.5	1.		79.8	0820	9780.
101	.077	88.	8.80	16.5	23.6	28.4	33.4	39.2	44.6	40.9	55.4	60.9	66.7	71.6	75.5			76.6	8900	1800.
114	80	.497	8.80	17.6	24.9	30.8	36.3	42.2	48.3	54.6	60.5	66.4	71.6	77.5	82.9	•		84.3	.0268	.0242
S/N 7 - 94	.074	8	08.2	16.4	23.2	78.7	34.2	40.2	46.9	52.0	57.4	63.1	68.5	73.8	79.3	•		81.7	8720.	9900
133	.073	.405	6.30	16.0	24.3	27.6	33.2	38.6	44.3	40.7	56.3	60.7	66.3	71.9	76.0	,		78.5	8/20.	.0362
AVERAGE STRESS	S		9.0	17.5	24.2	29.5	38.3	61.3	46.5	53.5	50.4	8.48	6.07					82.3	.0263	
STANDARD DEVIATION STRESS	S		95	16.	17.	8	1.28	1.43	1.97	2.36	2.46	2.63	17.7					4.97	.00182	
AVERAGE STRESS-30			7.2	14.8	22.1	35.5	31.5	37.6	46.6	199	62.0	7.99	62.8					67.4	9020	

FOOTHOTES: (1) TO NEAREST .001"

TABLE - AII-4 REDUCED TEST DATA

PEGN RH @ 125°F GeO F FOR 30 MINS: 31.0% O.090 O.12 O.12 O.14 O.16 O.18 O.00 O.12 O.14 O.16 O.18 O.00 O.12 O.14 O.15 O.15 O.14 O.15 O.1	TYPE TEST	EST		TESI	TEST DIREC	CTION		SPEC.	CONDI	SPEC. CONDITIONING	2	=	TEST COND	ON.	_	RESIN CONT	CONT	ž	NOMINAL P	PER PLY THICKNESS	HICKNESS
006 010 012 014 016 018 020 022 026 026 039 MAX STRESS	TENSION 900	06	°06	· ,	, ,			96% R FOR 4	H @ 12	50F		-86° F	FOR 3	D MINS:		31.0%			0800		
25.2 29.8 34.3 38.9 44.0 48.3 52.5 56.8 61.0 62.0 0.248 25.8 30.3 35.4 40.1 46.1 46.5 54.2 56.8 61.0 62.0 0.248 25.8 30.3 35.4 40.1 46.1 46.5 54.2 56.8 61.0 62.6 0.248 25.4 30.3 35.3 40.0 46.0 56.1 1.88 62.3 64.8 0.244 27.3 32.8 43.1 48.3 53.3 58.0 62.3 62.3 64.2 0.244 27.3 32.2 37.7 42.8 48.3 53.7 58.6 63.5 68.1 70.5 72.4 0.244 27.8 33.0 37.7 43.5 49.1 54.5 60.0 66.0 66.0 70.5 72.4 0.754 28.0 33.1 38.0 43.6 54.3 60.0 66.0 70.5 72.4 0.754 25.8 33.0 35.7 48.1 54.2 60.0	IN.7IN. 002 004	8	8		٠,	98	8	010.	210.	410.	910.	810	020	022	024	920	920	030	MAX	STRAIN	AREA
25.2 29.8 34.3 38.9 44.0 48.3 52.5 56.8 61.0 62.0 0248 25.8 30.8 35.4 40.1 46.1 46.5 54.2 58.6 61.0 66.8 0754 25.8 30.3 35.4 40.1 46.1 46.5 54.2 58.6 62.6 62.6 66.8 0754 25.4 30.1 36.0 46.0 46.1 18.8 62.9 64.8 0754 27.6 32.0 36.0 46.1 18.8 62.9 66.9 64.2 0724 27.6 32.0 36.0 62.0 62.0 62.0 66.0 66.0 66.0 66.0 66.0 70.4 72.4 0754 27.1 32.0 37.7 42.5 46.1 54.5 60.0 66.0 70.5 71.0 72.4 0754 25.8 30.1 36.1 54.1 54.5 60.0 66.0 70.5 <t< td=""><td>T⁽¹⁾ W⁽¹⁾</td><td>11</td><td></td><td></td><td></td><td>!</td><td></td><td></td><td>ı s</td><td>TRESS</td><td>· KSI</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>STRESS</td><td>Z</td></t<>	T ⁽¹⁾ W ⁽¹⁾	11				!			ı s	TRESS	· KSI									STRESS	Z
25.8 30.8 36.4 40.1 46.1 46.5 54.2 58.5 62.6 66.8 .0254 25.6 30.3 36.3 40.0 46.0 46.5 54.3 58.6 63.9 64.8 .0248 27.6 30.1 36.0 44.8 46.3 54.1 18.8 62.9 64.2 .0242 27.6 32.8 38.0 43.1 48.3 53.3 58.0 62.6 62.3 64.2 .0242 27.7 32.8 38.0 44.2 49.7 56.0 60.0 66.0 66.6 72.4 .0244 27.3 32.2 37.7 42.8 48.3 53.7 58.6 63.5 68.1 72.4 .0254 28.0 33.1 38.0 43.6 49.6 54.3 60.0 66.0 70.5 77.4 .0254 25.8 33.1 38.0 <	.076 .491 QB.C 16.1 20	08.C 16.1	16.1		⊼	9	26.2	\longrightarrow	34.3	38.9	44.0	48.3	52.5	56.8	61.0				62.0	.0248	.0373
25.6 30.3 35.3 40.0 46.0 64.5 54.3 58.6 63.9 64.8 .0248 25.4 30.1 35.0 44.8 46.3 54.1 14.8 62.9 64.2 .0242 27.6 32.8 32.8 33.3 56.0 60.0 65.0 60.6 60.6 60.0 60.0 60.0 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.5 70.4 70.	.074 .492 08.5 16.4 21	08.5 16.4	16.4		- 5	÷	8.8	 ∤	4.8	1.04	46.1	49.5	54.2	58.5	62.6	,			8.38	.0254	.0364
25.4 30.1 35.0 44.8 40.3 54.1 1.88 62.9 64.2 .0242 27.6 32.8 38.0 43.1 48.3 53.3 58.0 62.6 62.3 69.3 .0248 28.4 33.6 39.2 44.2 48.7 55.0 60.0 66.0 66.6 70.9 72.4 .0244 27.3 32.2 37.7 42.8 48.3 53.7 58.6 63.5 68.1 72.4 .0254 27.6 33.0 37.7 43.5 40.1 54.5 60.0 66.5 70.5 72.1 .0250 28.0 33.1 38.0 43.6 40.1 54.3 60.0 66.0 70.5 71.0 .0246 25.8 30.8 35.7 41.2 46.1 51.4 56.3 61.9 70.5 70.4 .0254 26.8 30.8 35.7 41.2 46.1 51.4 56.3 61.9 70.5 70.4 .0254 26.8 30.8 35.7 41.2 46.1	.073 .483 08.5 16.1 21	08.5 16.1 21	16.1 21	-5	2	-	8.6		36.3		46.0	49.5	54.3	58.6	63.9				84.8	.0248	.0360
28.4 33.6 43.1 48.3 53.3 58.0 62.6 62.3 62.3 66.3 66.3 66.3 66.3 66.4 66.3	.074 .495 08.2 15.8 21.0	08.2 15.8 21	15.8 21	-5		-+	79.	\rightarrow	86.0	_	44.8	6 0.3	2.3	6.83	62.9				64.2	.0242	9900
28.4 33.6 39.2 44.2 49.7 56.0 60.0 66.0 69.6 70.9 70.9 70.4 27.3 32.2 37.7 42.8 48.3 53.7 58.6 63.5 68.1 72.4 72.4 72.4 70.54 27.6 33.0 37.7 43.5 40.1 54.5 60.0 66.5 70.5 72.1 72.4 72.4 72.5 28.0 33.1 38.0 43.6 54.3 60.0 66.0 70.5 71.0 .0246 25.8 30.8 36.7 41.2 46.1 51.4 56.3 61.9 67.0 70.4 .0254 DATA CONTINULED ON NEXT PAGE	.071 .480 08.2 17.2 22.4	09.2 17.2 22.	17.2 22.	2	2	-	27.6	\rightarrow	38.0	43.1	48.3	53.3	58.0	62.6	62.3	H			69.3	.0248	.0348
27.3 32.2 37.7 42.8 48.3 53.7 58.6 63.5 68.1 . 72.4 .0254 27.6 33.0 37.7 43.5 40.1 54.5 60.0 66.5 70.5 . 72.1 .0250 28.0 33.1 38.0 43.6 40.6 54.3 60.0 66.0 70.5 . 71.0 .0246 25.8 30.8 36.7 41.2 46.1 51.4 56.3 61.9 67.0 . 70.4 .0254 DATA CONTINULED ON NEXT PAGE	.089 .496 09.4 17.8 23.4	09.4 17.8 23.	17.8 23.	8			28.4	33.6	39.2	44.2	49.7	56.0	0.09	66.0	9.08				6:02	.0244	.0342
28.0 33.1 38.0 43.6 40.6 54.3 60.0 66.5 70.5 70.5 70.1 .0250 28.0 33.1 38.0 43.6 40.6 54.3 60.0 66.0 70.5 70.5 71.0 .0246 25.8 30.8 35.7 41.2 46.1 51.4 56.3 61.9 67.0 70.4 .0254 DATA CONTINUED ON NEXT PAGE	.071 .490 08.2 17.3 22.2	09.2 17.3 22	17.3 22.	2			27.3	-+	37.7	42.8	48.3	53.7	58.6	63.5	88.1				72.4	.0254	.0. 18
28.0 33.1 38.0 43.6 40.6 54.3 60.0 66.0 70.5 · 71.0 .0246 25.8 30.8 36.7 41.2 46.1 51.4 56.3 61.9 67.0 · 70.4 .0254 DATA CONTINUED ON NEXT PAGE	.068 .491 08.4 16.5 22.8	08.4 16.5 22.	16.5 22	23		-	27.6		37.7	43.5	1.0	54.5	0.09	86.5	70.5				72.1	.0250	.0334
25.8 30.8 36.7 41.2 46.1 51.4 56.3 61.9 67.0 . 70.4 .0254	.068 .493 09.3 17.3 23.0	09.3 17.3 23.	17.3 23.	8			0.88		38.0	43.6	9.04	54.3	0.09	0.98	70.5	•			71.0	.0246	.0336
DATA CONTINUED ON NEXT PAGE	.074 .492 08.0 15.1 21.4	08.0 15.1 21	15.1 21	-2			25.8				46.1	51.4	56.3	61.9	67.0	•			70.4	.0254	1980
	AVERAGE STRESS								NTA CO	UNITN	ED ON	NEXT	PAGE								
	STANDARD DEVIATION STRESS					 															

FOOTNOTES: (1) TO NEAREST .001"
(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVEFAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-4 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

NESS		AREA	٧.	9428	.0428	0426	.0447	46.80	0470	79467	0462	9990	.0467			
THICK	†			•	o.	9	0.	9	9	9	9	9		<u> </u>		ļ.
ER PLY		STRAIN	STRESS	(1) 8720.	₽ /20:	4 210.	*** 20.	0610.	.0240	.0229	9220	.0238	2520	19241	.00224	4/10.
NOMINAL PER PLY THICKNESS	0800	MAX		79.5	75.2	56.7	67.2	57.2	0.69	96.4	67.2	9.89	F.7.8	67.9	2.98	69.0
Ž		089														
CONT.	ž	920			•											
RESIN CONT.	31.0%	920		(1)	72.9								٠			
_		.024		70.0	68.2		67.7		67.0	•	•					
Š.	86°F FOR 30 MINS.	.022		64.7	63.5		63.0		62.5	63.5	66.3	64.5	64.5			
TEST COND	FOR 3	.020		6.69	58.9		58.1	•	57.5	58.9	60.2	59.5	59.3			
	-86°F	810.		55.0	53.7		62.8	56.4	52.8	53.5	54.9	1.75	54.0			
ဋ		910.	19	40.4	48.5	52.6	48.0	49.9	47.5	48.2	40.8	48.9	48.8	48.0	2.11	42.7
SPEC. CONDITIONING	125°F 175	.014	STRESS	43.6	43.2	46.5	42.4	44.5	40.8	42.8	44.2	43.3	43.1	42.6	1.91	36.9
CONDI	96% RH @ 125 ⁰ F FOR 42 DAYS	.012		38.2	37.9	41.0	37.1	38.8	36.8	37.4	38.5	38.2	37.8	37.4	1.61	32.6
SPEC.	8 5	010		32.6	32.2	36.6	32.0	31.8	32.0	31.9	33.2	32.7	32.8	32.2	1.36	28.2
		8		27.4	27.4	29.6	26.8	27.7	26.8	26.9	27.6	27.8	27.2	27.1	1.10	23.8
ECTION		900		22.1	22.0 .	24.0	21.8	24.0	21.5	22.0	23.0	23.0	22.3	222	8	19.3
TEST DIRECT	98	8		16.2	16.8	18.4	16.0	17.1	16.0	16.5	17.3	17.2	16.4	16.6	.78	14.3
TES		2000		08.5	7.80	10.6	68.5	09.2	08.5	98.8	6.80	09.2	08.8	8.3	8.	7.3
Į.	,		E,M	.501	407	.511	8	884	8	492	.497	8	.497			
TYPE TEST	TENSION	ž	£_	.08£	980	280.	88	.087	8.	.085	8 .	.002	.002	,	S	
Ĺ		IV.N												STRES	STAE	
.01	S/N 11, S/N 15	STRAIN . IN./IN	SPEC. NO.	57	175	281	187	191	_	3	88	_	88	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-3 σ
PANEL NO.	S/N 7	S	SPE.	S/N 11 - 173	-	÷	=	-	S/N 15 - 93	os	Ø.	97	65	AVE	STAN	AVE

TABLE - AII-5 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	Tè	TEST DIRECT	ECTION	2	SPEC.		CONDITIONING	٥	ا ا	TEST COND	NO.	L	RESIN CONT	ONT	N	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 11, S/N7 IVA, S/N7	TENSION	Z		00			95% RH @ 125 ⁰ F FOR 42 DAYS	10 125 DAYS	9 E		25 ⁰ F F	25°F FOR 30 MIN	Z S		31.0%			1600		
STRAIN IN./IN	./IR		.002	904	900:	800	010	210.	.014	910.	810.	020	.022	.024	.026	028	030	MAX	STRAIN	AREA
SPEC. NO.	Ē	W(1)							STRESS - KSI	. KSI]						200	STRESS	Z Z
S/N 7 I V A · 86	170	.492	4.80	16.9	23.4	28.5	34.4	40.4	46.2	51.9	57.5	63.0	67.9					68.8	9220	0349
96	88	.493	8.80	17.2	24.3	30.2	36.2	42.6	48.6	55.0	60.5	4.98	71.0	٠				71.8	.0223	.0336
103	.075	\$	8.8	16.5	23.0	28.4	34.0	39.6	45.4	51.2	9.99	6.19	66.4					67.4	.0228	.0370
113	070	497	08.3	16.7	22.7	28.2	34.5	40.2	46.0	52.5	58.0	63.8						67.8	.0219	.0348
8/N 7 - 98	.073	495	08.3	15.9	22.6	28.2	38.4	30.8	46.6	51.5	57.0	62.6		,				0.99	2120.	1960
S/N 11 - 153	.092	497	08.0	15.9	22.6	28.6	34.5	40.5	46.1	52.0	57.5							62.2	.0200	.0462
161	88	664	98.6	16.8	22.5	27.6	33.2	38.7	44.6	50.1	55.4	·						57.1	8810.	.0489
163	.082	506	88.4	16.1	22.6	28.4	34.2	40.5	46.0	52.0	57.8	65.4						68.0	.0212	3940.
165	8.	483	7.88	16.7	22.8	28.6	34.6	40.7	6.0	52.6	58.3	63.5						67.3	9120	.0448
167	8.	402	28.7	17.1	23.0	28.4	34.6	40.7	46.8	52.4	57.8	63.1	1		įπ			67.0	7120.	7440
AVERAGE STRESS	SS		8.5	16.6	23.0	28.5	34.5	• 0	# 1	52.1	57.6					-		66.4	-0214	
STANDARD DEVIATION STRESS	ssas		8,	47	8	8	27.	1.00	1.07	1.25	1.31							3.87	.00122	
AVERAGE STRESS-3 <i>G</i>			7.7	15.2	21.2	28.5	22.3	37.4	43.0	£0.9	53.7			·				54.8	7210.	

TABLE - AII-6 REDUCED TEST DATA

PANEL NO. TYP	TYPE TEST	1.5	TES	TEST DIRECT	ECTION		SPEC.	CONDITIONING	NINOIT	G	٣	TEST COND	نے	L	RESIN CONT	ONT.	2	NOMINAL PER	ER PLY TI	PLY THICKNESS
S/N 7, S/N 11 TE	TENSION	٠,		900			PS% R FOR 4	85% RH @ 125° FOR 42 DAYS	D. (0		25° F F	F FOR SU MIN	MIN.		31.0%			06.50		
STRAIN IN JIM	3 '		.002	900	900:	800	010.	210.	.014	016	810.	.020	.022	.024	920	820	030	MAX	STRAIN	AREA
S.E.	τ(1)	(1)/(1)						S	STRESS . KS	KSI								6934	STRESS	Ž.
S/N 7 - 27	770	184	7.70	14.8	19.7	24.1	28.6	33.0	37.6	42.1	46.4	50.0						52.2	.0212	9750.
88	.073	.493	1.8	15.3	20.8	25.6	30.0	8.4.8	36.8	44.5	49.1	53.1						55.1	.0213	.0360
=	170.	96	9.80	16.1	21.6	\$ 9.	31.4	38.4	41.1	46.3	50.8	55.0						57.0	.0210	0348
87	070	964	1.80	15.9	21.2	26.3	31.3	37.0	61.6	46.8	51.8	56.4	61.0					62.0	.0222	.0348
3 8	88	964.	88	15.6	21.0	25.8	30.7	36.0	41.2	46.3	55.9							59.4	.0215	.0347
S/N 11 - 120	199.	.492	8.70	14.6	19.6	24.0	28.9	33.6	38.2	42.7	47.2	51.5						52.1	.0201	0447
124	160.	.493	1.80	15.2	20.1	25.0	31.7	34.8	39.3	43.1	47.0	51.0						53.9	.0214	.0448
138	680	.492	08.3	15.5	20.8	25.5	32.4	35.6	40.6	45.5	50.3							55.0	.0200	.0442
142	8	\$	08.2	15.5	20.7	25.8	33.3	36.3	41.3	46.4	51.3							60.8	.0219	.0445
3- 1 -5	.088	804	08.5	17.0	21.5	26.8	32.0	37.8	43.5	48.5	53.8							55.1	.0188	.0437
AVERAGE STRESS			8.2	15.5	20.7	26.4	31.0	36.5	40.4	45.2	50.4				 -			56.3	.0200	
STANDARD DEVIATION STREES	%		.28	3 5.	02.	.87	1.38	6	1.76	2.06	3.06					_		3.46	20100	
AVERAGE STRESS-30			.74	14.0	18.6	22.8	38.5	0.10	1.08	39.0	41.2							46.0	8710.	

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-7 REDUCED TEST DATA

S/N 71, S/N 7 1 V A TENSION STRAIN IN./IN	0		Z O	STEC.	2000	CONDITIONING	٥	Ŧ	TEST COND	Ö	- u.	RESIN CONT.	ONT.	Ž	NOMINAL PER	ER PLY TH	PLY THICKNESS
(1) W(1) MBB (493 MB9 (497 MB9 (494 MB9 (493 MB9 (4				125° FOR	125 ⁰ F @ 55% RH FOR 42 DAYS	S RH			F.		-	31.0%		<u> </u>	8800		
W(T)		004 .006	800	010	.012	410.	.016	810	020	.022	.024	920	028	030	MAX	STRAIN	AREA
. 494 . 494 . 494 . 494 . 494 . 494						STRESS - KSI	KSI								6630	STRESS	Z.
. 494 . 494 . 494 . 493		16.0 22.8	28.1	33.8	39.6	45.3	51.6	57.0	62.5	,					68.0	.0219	.0349
.497 .494 .493		16.0 23.6	28.2	34.4	40.8	46.9	53.0	59.1	4.4						67.8	7120	.0335
494 493		16.6 23.3	28.8	35.0	41.3	47.1	52.5	9.89	63.5	,		l 			64.5	.0208	.0343
494 493	4 16.2	.2 23.2	28.8	34.3	40.3	46.0	51.6	57.5	62.0				ļ		63.5	.0210	.0359
.494	1	15.9 22.4	27.8	33.4	88.3	44.7	50.4	55.7	61.1					,	63.9	9120	.0365
.493	4 14.6	6 21.6	26.8	32.1	37.8	43.0	48.1	54.0	59.2	63.0					63.0	.0220	0380
		16.0 22.8	28.0	33.7	38.4	45.4	50.9	5.95	6.7	,					4.18	.0213	.0350
.068 .496 08.9		17.2 24.2	30.1	36.2	42.1	(E) 48.1	54.3	66.3	(.) 65.4				-		1.99	8	.0337
.070 .493 08.4		15.9 23.2	28.6	34.2	40.1	46.1	51.9	57.4	62.E	65.0					65.3	.0220	.0345
.072 .493 08.5	.5 16.1	1,1 23.0	28.2	33.7	39.4	45.4	51.0	9.99	61.5	_					64.2	0210	.0355
AVERAGE STRESS			-		DATA	CONTINUED		ON NEXT PAGE	T PAGE								
STANDARD DEVIATION STRESS													-				
AVERAGE STRESS-3 <i>G</i>																	

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-7 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PASE

PANEL NO.	TYPE TEST	rest	F	TEST DIRECTI	RECTIC	Z O	SPEC	COND	SPEC. CONDITIONING	NG	Ĺ	TEST COND	NO.	-	RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 11,S/N 7 IV A S/N7	TENSION	NO		စ			125°F	25°F ● 95% HUM: FCR 42 DAYS	TOW.			R		-	31.0%		 	8800		
STRAIN IN,/IN.	IN./IN.		005	8	906:	80	010.	.012	\$10 .	910.	810.	020	.022	024	920	920	0ED	MAX	STRAIN	AREA
SPEC. NO.	1(1)	(r)M							STRESS · KS)	. KG:					1			2	STRESE	N.
S/N 11 - 118	96.	2	0.90	17.5	23.4	29.5	36.5	42.0	48.5	54.7	ပ			} 				67.0	ပ	0400
92	.	495	07.8	15.6	21.8	, 26.9	32.9	38.9	45.1	50.9	57.4	62.0						2.	.0212	.0450
128	.88	564.	08.5	16.6	23.2	28.8	36.1	41.5	47.5	54.1	0.09							34.6	.0200	0410
130	8	.497	07.9	14.9	21.3	26.5	32.0	37.8	43.3	49.0	54.6	59.7						61.3	.0210	.0469
132	8	.497	88.4	16.3	22.6	28.3	34.8	41.0	47.0	53.3	59.0	9.69	,					84.8	9020	7190.
134	88.	479	08.2	15.9	22.1	27.8	33.4	39.5	45.2	51.3	56.5	1.19						61.6	\$ 020.	.0425
143	88	494.	4.80	15.7	21.9	27.4	33.0	39.2	45.1	51.1	56.9	61.6						63.4	.0210	06.30
145	989.	4	08.3	16.5	22.6	28.6	34.6	41.0	47.1	52.9	59.0	63.7				-		0.38	0500	.0420
147	88	\$	08.0	16.3	21.6	26.9	32.8	38.8	44.5	50.0	55.4	-				_		60.4	00200	.0439
140	88 .	3 .483	08.5	16.2	22.4	28.2	34.0	39.8	46.1	51.9	57.1				ŀ			E5.7	.0198	A530.
AVERAGE STRESS	RESS		8.3	16.0	72	28.1	33.9	400	46.9	51.7	57.1							0.40	0770	
STANDARD DEVIATION STRESS	TRESS		0.36	0. 68		0.9	1.10	1.72	1.46	1.67	1.87							2.04	19000.	
AVERAGE STRESS-3 O			07.2	13.0	2.03	26.0	30.6	36.3	41.5	46.7	51.9							67.9	1610.	
					_	┥.	-	-				1	1	1	1	-	7			-

TABLE - AII-8 REDUCED TEST DATA

TYPE TEST TEST DIRECTION SPEC. CONDITIONING	Z	Z	Z	-	SPEC. CONDIT	CONDIT	⊢ ¯	IONI	9	-	TEST COND	NO.		RESIN CONT	TNC	NOM	NAL PER	A PLY TH	NOMINAL PER PLY THICKNESS
90° 1.08			FOR	For	S.P.	-41	2 DAY:	₹			F		_	310%	ł	-	8800		
.002 004 .006 .008 .010	004 .006 .008	900.	800		010		210.	.014	910	.018	020	.022	.024	920	820	030 MA	MAX S	STRAIN	AREA
W ⁽¹⁾							S	STRESS · KSI	· KSI							; 		STRESS	Z Z
.496 07.1 13.5 18.5 22.8 2	13.5 18.5 22.8	18.5 22.8	22.8			27.5	31.8	36.4	40.5	44.7	-					*	0.84	0195	.0382
.491 07.6 14.0 18.8 23.2	14.0 18.8	18.8	-	23.2		27.4	31.8	36.3	40.6	44.6	48.5					*	49.6	.0206	.0383
.493 07.5 14.7 20.0 24.7	14.7 20.0	20.0		24.7		7.62	33.7	39.4	1.1	48.6	52.6					ić	53.0	0202	0360
.493 07.7 14.5 19.7 24.4	14.5 19.7	19.7		24,4		8.62	34.2	38.9	43.5	47.8	•					2	51.4	9610	.0365
.494 08.0 14.0 19.5 24.4	14.0 19.5	19.5		24.4		29.2	9.0	38.8	43.3	47.4						35	90.5	.0193	.0365
.490 07.9 14.6 20.4 26.0	14.6 20.4	20.4		26.0		30.3	35.6	40.6	45.1	49.5	54.6					3	54.6	0020	.0343
.491 08.4 15.7 20.9 25.6	15.7 20.9	20.9	-	25.6		30.5	35.6	40.7	45.6	50.4						rg.	54.2	9610	.0344
.495 08.6 15.7 21.5 25.7	15.7 21.5	21.5	-+	25.7		31.6	36.9	42.3	47.2	52.8	57.0	•			-	2	57.5	0201	.0337
.490 08.6 16.0 21.3 26.6	16.0 21.3	21.3	-	26.6		31.8	37.2	42.6	1.8	53.0					_	io	57.5	0500	.0338
.491 08.5 16.1 21.9 26.9	16.1 21.9	21.9	_	26.9		32.2	37.6	43.2	48.6	53.9	58.8	·				ŭ	59.3	.0202	.0329
						5	TA CO	NTIN	DATA CONTINUED ON	NEXT PAGE	PAGE				 				
																<u> </u>	-		
														-		-			

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS AEPORTED FOR RECORDING PURPOSES BUT DELETE.) FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AII-8 REDUCED TEST DATA DATA DATA CONTINUED FROM PREVIOUS PAGE

KNESS		AREA	v IZ	0426	06.40	.0425	0630	0431	0424	19461	14	0465	0449			
LY THIC		STRAIN		90	7	0	2	2	,	œ	٥	4	9	 -	8	90
PER P		STR	STR	.0186	.0187	0100	2710.	.0182	7716.	9/10	0110	184	.0186	96.	00100	0.158
NOMINAL PER PLY THICKNESS	9900	MAX	31 453	54.2	54.8	56.3	51.0	55.9	54.6	50.4	51.4	52.7	543	53.5	2.91	44.8
2		.030														
ONT	31.0%	820														
RESIN CONT	31	920:				_										
_		.024														
NO.		220.														
TEST COND	R.T.	.020			•											
٢		810.		53.6	53.1	52.2	30	55.6	•	•	-	51.6	52.8			
٥	٧.	910.	KSI	48.6	48.1	47.3	48.5	50.1	57.3	46.4	48.4	46.8	47.5	46.4	2.81	38.6
CCNDITIONING	125 ⁰ F @ 95% HUM. FOR 42 DAYS	10.	STRESS · KSI	43.3	43.1	42.0	43.4	44.8	44.8	41.3	42.9	41.5	42.4	41.4	2.43	2.8
CCND	F 6 9	210.] "	38.0	37.6	36.8	37.7	38.6	39.0	36.2	37.4	36.1	37.0	36.1	2.07	29.9
SPEC.	125 FOR	010		32.4	32.1	31.0	32.1	33.3	33.3	31.0	32.0	31.0	31.8	31.0	58:	28.3
-		800		27.9	26.9	25.5	26.6	27.4	27.8	25.7	26.7	25.8	26.8	25.9	8.	21.4
ECTION		900		21.7	21.9 ′	20.6	21.1	21.9	22.6	20.8	21.4	20.6	21.3	20.8	86	17.6
TEST DIRECTI	300	400		15.7	16.2	15.2	15.7	16.6	17.0	15.5	15.7	15.3	15.8	15.4	88	12.8
TES		2007		98.5	09.3	08.3	4.80	09.3	09.4	08.3	6.80	0.80	88.7	8	.62	6.5
15	_		(L)M	502	.500	.500	89	.513	505	.513	.501	.511	506			
TYPE TEST	TENSION	z ⁱ	1(3)	.085	98	.085	98	8	9	880	880	8 .	88	1.2	92	
77		STRAIN . IN./IN.												STHESS	D N STRES	ь
PANEL NO.	S/N 7, S/N 11	STRAIR	SPEC. NO.	S/N 11 - 171	172	174	178	178	184	186	188	190	192	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-3 O

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-9 REDUCED TEST DATA

NONE .006 .008 010 .012 .014 .016 STRESS - KSI	004 .006 .008 010 .012 .014 STRESS	NONE 4 .006 .008 010 .012 .014 STRESS.
19.8 24.8 30.2 35.8	13.3 19.8 24.8 30.2	19.8 24.8 30.2
20.4 , 25.2 30.5 36.4	14.2 20.4 , 25.2 30.5	20.4 , 25.2 30.5
20.8 26.1 31.0 37.0	14.4 20.8 26.1 31.0	20.8 26.1 31.0
20.8 25.8 31.0	15.2 20.8 25.8	20.8 25.8
20.4 25.8 31.0	14.8 20.4 25.8	20.4 25.8
20.6 26.0 31.9	14.5 20.6 26.0	20.6 26.0
20.0 26.0 32.0 37.5	14.4 20.0 26.0 32.0	20.0 26.0 32.0
20.6 26.0 31.8	14.0 20.6 26.0	20.6 26.0
20.2 25.4 30.8	13.8 20.2 25.4	20.2 25.4
20.6 26.0 32.2	14.4 20.6 26.0	20.6 26.0
DATA CONTINUED ON NEXT PAGE	DAT	DAT

TABLE - AII-9 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

ND. RESIN CONT. NOMINAL PER PLY THICKNESS	0 Min 31.0% .0092	.022 .024 .026 .028 .030 MAX STRAIN AREA	STRESS	. 67.5 0208 .0315	63.0 0195 0332	65.1 0216 0338	0.00	63.8 . 64.0 .0221 .0367					60.1 .0202	375 .00102	
NOMINAL	8	_		67.5	63.0	65.1	0.09	64.0					60.1	3.75	
		<u> </u>								_	ļ.,				ļ
CONT	8	.028													
RESIN	31	.026													
-		.024						-							
Š	O Min	.022				-	ŀ	63.8							
TEST COND	160°F For 30 Min	020		66.8	•	62.2	59.1	58.6							
=	160	810.	4	60.4	58.1	56.3	54.7	54.0					27.	22.7	T
5		910.	īŞ.	54.0	52.5	51.0	49.0	48.8					49.2	2.01	T
SPEC. CONDITIONING		10.	STRESS - KSI	47.6	46.1	44.7	43.5	43.1					43.5	1.03	T
ONDIT		210.	<u>ه</u>	41,3	40.0	39.1	37.8	36.8		<u> </u>			37.6	1.52	T
PEC. C	NONE	010.		36.0	34.0	32.9	31.6	31.4					31.8	1.31	T
-		800		28.6	28.0	27.0	26.6	25.9					26.2	1.00	\vdash
TION		900		22.8	22.6	9		20.4	_			_	20.9	0.83	-
TEST DIRECTION		900.	1	15.9 2	15.7 2	14.8	14.0	13.9				-	14.5	0.75	-
TEST	စ	0. 500.		07.9	07.8	07.4	07.6	06.9		-			7.2	0.50	\vdash
		ð.	=	ļļ			96								-
TEST	NO	L	W(1)	.483	71.495	8.497		496			_				
TYPE TEST	TENSION	NIV.	13	8	.067	988	.072	.074					SS	IESS	
PANEL NO.	S/N 7, S/N 15	STRAIN . IN./IN.	SPEC. NO.	S/N 7 - 112	113	114	115	116	,				AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE

FOOTNOTES: (1) TO NEAREST ,001"

TABLE - AII-10 REDUCED TEST DATA

ICKNESS		AREA	y . ≧	.0465	1740.	0440	.0465	.0462	1740.	.0473	.0463	.0462	.0468			
NOMINAL PER PLY THICKNESS	1600	STRAIN	STRESS	.0182	.0188	0610	.0188	.0181	.0192	0610.	8710.	8/10.	.0192	.0186	99000	.0169
JOMINAL P	1	MAX	2	49.3	49.7	50.7	50.1	49.4	17.	49.3	48.0	47.5	49.5	49.3	0.95	46.5
-		030														
CONT		028														
RESIN CONT	31.0%	920											Ь.			
<u> </u>		024														25
Ģ	O MIN.	.022			-											
TEST COND	FOR 30 MIN.	.020						,					-18			
#	160 ⁰ F	810.		47.4	47.8	47.9	48.4	49.0	47.4	47.5	,		47.0			
g		910.	KSI	42.6	43.3	43.5	44.1	44.4	42.5	43.1	44.3	43.2	42.5	43.4	0.72	41.2
NINOI		.014	STRESS - KSI	37.6	38.2	38.0	38.8	39.2	37.6	38.1	39.0	38.8	37.4	38.2	30.0	26.4
SPEC. CONDITIONING	NONE	012	S	32.4	32.9	32.6	33.4	33.7	33.0	32.8	34.2	33.6	32.9	33.2	0.58	31.5
SPEC. C	-	010		27.3	28.5	27.8	28.8	28.7	27.6	28.2	29.0	28.2	27.8	28.2	99.0	26.5
		800		22.6	22.9	22.8	23.6	23.5	22.8	23.3	23.8	23.8	22.8	23.2	0.46	21.8
CTION		900		18.3	18.0 ,	17.8	18.7	18.5	18.3	18.4	19.0	18.6	18.2	18.4	0.35	17.4
TEST DIRECT	06	9004		12.9	13.6	13.1	13.8	13.5	13.4	13.7	13.8	13.9	13.2	13.5	0.33	12.5
TES		200		8.90	9.90	1.90	07.5	0.70	8.90	8.96	6.90	9.70	9.90	6.7	0.47	5.3
īī			(1)W	.496	964.	.495	. 4 96	26	964	.493	.493	.492	.493			
TYPE TEST	TENSION	-j	(1)	.094	560.	.093	460	.093	8 6	98	460	8	560		ç	
7	TE	NI/NI												TRESS	STRES	
PANEL NO.	S/N 15	STRAIN	SPEC. NO.	S/N 15 - 81	82	7 8	85	98	87	88	88	06	92	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERACE STRESS-30

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-11 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST		ST DI	TEST DIRECTION	z	SPEC	SPEC. CONDITIONING	TIONIE	و	Ţ.	TEST COND	Š.		RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 7, S/N 7 IVA	TENSION	N C		တ			86. ROT	96% RH @ 125 ⁰ F FOR 42 DAYS	25°F		160	160°F FOR 10 MIN	NEW		31.0%			0800		
STRAIN - IN./IN.	IN./IN.		.002	90	900	900	.010	210.	>10 .	910.	810.	.020	.022	20.	026	.028	080	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)							STRESS . KSI	KSI								20 11 12 12 12 12 12 12 12 12 12 12 12 12	STRESS	N.
S/N -7 97	.073	.497	07.8	14.9	21.6	27.6	33.2	39.2	4.5	8.64	'							53.7	9710.	.0362
S/N 7 IVA - 89	850.	\$	08.3	15.8	22.3,	29.2	35.2	41.0	46.5	,								49.5	0310.	9020
92	690	164	07.6	07.6 ⁽¹⁾ 14.7 ⁽¹⁾	(1)	28.8	34.9	40.5	46.4	515	 '							54.4	.0174	.0341
3	.088	494	08:0	15.2	22.0	28.6	34.6	40.2	46.2	50.9(1)								56.5	6710.	.0336
88	070.	.492	07.2	14.4	21.6	28.4	34.5	40.3	46.0	51.2								56.3	8710.	.0348
102	.07	46	1.70	14.3	20.8	27.2	32.9	38.4	43.6	48.3	53.0	,						53.4	.0182	9960
108	7.00.	.493	07.4	13.7	20.0	26.0	31.6	36.8	42.2	47.2	51.0	,			 		 !	51.4	.0182	0330
109	9.00	.495	06.9	13.6	19.7	25.8	31.7	36.8	42.0	47.4	,							51.0	0180	9/20.
112	.070	.497	07.5	15.0	22.2	28.8	35.1	40.8	45.6	51.8	,							1.76	.0172	.0348
115	990.	.496	08.3	15.7	22.8	29.6	35.7	41.5	47.2	52.3	,				<u> </u>			53.4	.0168	7550.
AVERAGE STRESS	RESS						PA	A CON	TINUEL	NO	DATA CONTINUED ON NEXT PAGE	GE			<u> </u>					
STANDARD DEVIATION STRESS	TRESS																			
AVERAGE STRESS-3 σ																				

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-11 REDUCED TEST DATA DATA DATA CONTINUED FROM PREVIOUS PAGE

CN	TYPE TEST	EST	-	TEST DIRECT	FCTION		Sper	SPEC CONDITIONING	N	C TO SEC CONDITIONING TEXT OF		TEST COND	٩	Ļ	PESIN CONT	INC	2	O LANIMO	SSENA CITE Y 10 030 INNIMON	S KNIESS
			<u>:</u>			$\frac{1}{2}$	3			,	-					.	•	TWAIII.	בענרו	CRINESS
S/N 11 S/N7 S/N7	TENSION	NC		00			95% P	95% P'H' @ 125 ⁰ F FOR 42 DAYS	50F		160°F	160°F FOR 10 MIN	Z		31.0%			0600		
STRAIN IN./IN	N./IN.		.002	904	900	800	010.	.012	10.	.016	810.	020	220	.024	920	820	030	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	w'1)						, v	TRESS . KSI	KSI									STRESS	ž
S/N 11 - 151	.094	.495	8.70	14.8	21.1	27.1	32.7	1					_					35.3	1110.	.0465
152	160 .	.495	07.1	14.6	20.8	26.7	31.8	37.9	43.9	,								48.0	.0153	.0465
154	160.	.490	6.70	14.5	20.9	26.9	33.0	38.8	44.5									50.3	.0160	.0454
159	.087	764.	0.90	14.4	21.2	7.72	33.5	39.2	45.3	50.8	,							54.5	≯ 710.	.0433
160	680	.497	1.80	13.6	21.4	27.2	32.8	38.7	44.5	_								49.0	.0153	.0442
132	960:	.502	9.80	16.6	24.0	30.3	35.9	41.9	48.0	-								52.1	.0154	.0451
164	.	.493	07.4	14.0	7.02	27.4	33.1	38.8	42.5	50.1				-				53.3	.0174	.0449
991	.091	.492	07.4	14.1	20.8	27.3	33.6	39.8	8.8	-								51.9	.0156	.0447
168	060	.498	0.80	15.2	21.9	27.9	34.2	39.8	45.3	50.8								52.4	.0168	.0448
170	060	4 .	07.4	14.9	21.6	27.4	33.0	38.8	8.4	-								49.0	.0160	.0449
AVERAGE STRESS	IESS		7.5	14.7	21.5	27.8	33.6											51.4	.0166	
STANDARD DEVIATION STRESS	RESS		.55	77.	76.	1.16	1.31											4.23	07100.	
AVERAGE STRESS-30			5.9	12.3	18.6	24.3	29.7											38.7	.0115	
						İ														

FOOTNOTES. (1) TO NEAREST .001"

TABLE - AII-12 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	 	TEST DIRECT	ECTION	2	SPEC.	COND	SPEC. CONDITIONING	ទី	1	TEST COND.	NO.		RESIN CONT.	ONT	ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
3	TENSION	Z		90 ₀			POR F	96% R H @ 125°F FOR 42 DAYS	25°F		160°F	160 ⁰ F FOR 10 MIN	NIM		31.0%				0800	
STRAIN IN /IN.	JIN.		.002	.004	900:	800	010.	210.	410.	910.	810.	.020	.022	.024	920	920	030	MAX	STRAIN AT MAX	AREA
SPEC. NO.	1-1	W(1)							STRESS · KSI	KS			1 !						STRESS	Z
II.	.073	.495	07.2	13.3	18.4	24.6	29.1	8	ī									36.2	.0128	1960
	.073	495	6.90	13.3	19.4	24.4	29.4	78	1									38.7	.0138	1960.
13	.073	.495	9.90	13.3	19.4	25.0	29.6	34.6										38.4	.0136	.0361
14	.072	.495	07.4	13.5	19.4	25.0	29.8	34.8	39.4									42.6	.0154	9920
15	.073	.495	6:90	13.0	18.8	24.1	28.8	33.8	38.8									39.2	.0142	1960.
16	.073	487	07.3	13.5	19.7	25.0	29.8	34.9	4.8	,								42.0	.0152	9900
17	.072	88	06.5	13.1	18.8	24.2	29.0	34.1	39.2	1					-			42.6	.0154	3362
18	.073	.492	06.7	12.5	17.8	22.6	26.4	30.4	34.3									35.3	.0142	.0369
19	.073	.490	06.2	12.3	17.8	22.4	26.6	30.5	ι									34.0	.0138	9920
20	.070	.490	06.7	12.8	18.1	23.0	27.1	31.2	35.0	-					-			36.6	.0142	.0343
AVERAGE STRESS	SS						à	DATA CO	CONTINUED ON NEXT PAGE	ED ON	NEXT F	AGE								
STANDAND DEVIATION STRESS	ESS																			
AVERAGE STRESS-30																				

FOOTNOTES: (1) TO AEAREST .001"

TABLE - AII-12 REDUCED TEST DATA
DATA CONTINUED FROM PREVIOUS PAGE

							DAT	A CON	TINCE	D FRC	DATA CONTINUED FROM PREVIOUS PAGE	NIOUS	PAGE								
PANEL NO.	TYPE TEST	TEST		TEST	TEST DIRECT	TION	_	PEC. C	SPEC. CONDITIONING	TIONIA	<u>.</u>	TE	TEST COND	ND.		RESIN CONT.	CONT.	ž	OMINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N7, S/N11	TENSION	NO		6	°06			95% RI FOR 4:	95% RH @ 125 ⁰ F FOR 42 DAYS	50F		160 ⁰ F	160 ⁰ F FOR 10 MIN	NIMO		31.0%	:		0600		
STRAIN IN./IN	NI/N		.002		900	900	£000	010	.012	410.	910	810.	.020	.022	.024	920	.028	.030	MAX	STRAIN	AREA
SPEC. NO.	T(1)	1) w(1)	1						S	STRESS · KSI	·KSI									STRESS	Z
S/N 11 - 119	.092	.493		12 8.90	12.6	18.1	7.22	27.5	32.2										1.98	.0137	154.
121	.093	13 .491		1:90	12.1	17.3	21.7	25.9	30.7	34.9									36.1	.0144	.456
122	980	6 .492		06.6	13.7	19.4	24.6	29.8	36.0	40.2	_								44.4	.0156	.423
123	.085	5 .492		1. 7.70	14.4 24	20.6	25.8	31.1	38.6	42.2	1	П							46.8	.0160	.418
125	.092	2 .495		08.6	13.2 18	18.7	23.8	28.0	32.6	37.2									39.4	.0150	.455
136	080	0 .482		07.6	14.2 2	20.0	24.0	30.0	34.8	39.6	•								41.2	.0146	434
137	.089	9 .497	6.70 7		14.5 19	19.9	25.0	29.7	34.8	39.6	•								42.9	.0154	.442
139	080	964.	6 06.7		13.4 18	18.8	23.6	28.2	33.2	37.9	42.0								42.8	.0162	4 .
141	880	8 26	4 07.6		14.3	20.0	25.3	30.6	89.	41.0	,								42.2	.0145	.436
146	.089	9 .497	7 06.7		12.8 18.		23.1	27.6	32.6	37.4									40.3	.0152	.442
AVERAGE STRESS	ESS		9	6.9	13.3 19.0		24.0	28.7	33.5										39.8	.6147	
STANDARD DEVIATION STRESS	RESS		æ)	99.		90.	1.11	1.48 2	2.47										3.50	.00092	
AVERAGE STRESS-3 σ			νή —	5.4	11.2	16.3	20.7	24.3	26.1										29.3	6110.	

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES SECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-13 REDUCED TEST DATA

PANEL NO	1 4 9	TYPE TEST	-	TES	T DIR	TEST DIRECTION		SPEC	CONDI	SPEC. CONDITIONING	10]]	TEST COND.	ND.		RESIN CONT	ONT	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 7	. 61	FNSION			B			400°F	FOR 1	400 ⁰ F FOR 130 HRS		400°F	400°F FOR 30 MIN	N N		31.0%			0600	Í	
STRAIN	2 2			700	900	90	800	01.0	012	0.014	.016	910	020	022	024	920	820	030	MAX	STRAIN	AREA
SPEC	-	1,1	Î.						S	STRESS - KSI	IS .									STRESS	Z
S/N 7 - 85	, 	98	98	1.08	12.8	18.9	25.6	31.7	37.8	0.1	49.3	55.0	,				-		1.98	.0187	.0328
88	-	986	.58	68.2	13.4	19.8	26.0	31.7	37.5	43.3	8.8	,							51.9	0710.	0328
87		. 070	497	8.	12.1	17.9	24.0	2 .	38.6	8.04	46.3	51.5	,						53.0	.018¢	.0346
88		072	496	0.0	12.1	18.2	23.8	7.02	7.3	0.04	45.6	,							50.3	0810	.0367
86		074	494	7:30	11.8	17.3	22.7	27.6	33.1	88.4	43.7	4.8	,						49.4	.0186	9980
88	-,	.073	164	9.90	12.0	17.8	23.1	28.6	34.2	39.8	45.0	20.0	,						50.5	98.0	0960
100		.072	964.	06.2	12.3	17.9	23.6	29.2	34.5	39.8	45.4	1.05	-						51.	.0186	.0367
101		.072	164	06.2	12.3	17.9	23.6	28.6	34.3	39.6	4.6	ı				<u></u>			3	.0174	9920
109	-,	. 170.	.492	06.3	12.3	18.4	24.0	29.2	34.7	0.04	45.4	,							47.4	.0167	0349
110	-	.071	.491	06.3	:3	18.4	24.0	28.7	36.0	40.2	45.7	,							1 64	8710.	0349
AVERAGE STRESS	TRESS							DAT	A CON	TINUE	N NO	DATA CONTINUED ON NEXT PAGE	je je			_] 		<u> </u>
STANDARD DEVIATION STRESS	STRESS	۸,															-				
AVERAGE STRESS-30																					
					1				1	1	1	1	1	1		1	1	1			

FOOTNOTES (1) TO NEAREST .001"

TABLE - AII-13 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

THE STREET OF STREET STREET, S

						ָ נ	200	CALLA	מי עם	DATA CONTINUED FROM FREVIOUS PAGE	3	700								
PANEL NO	TYPE TEST	EST	TE	TEST DIREC	ECTION	7	SPEC	SPEC CONDITIONING	TIONIN	ĘĊ.	TE	TEST COND	Ü,	<u>.</u>	RESIN CONT	INO	NON	MINAL P	NOMINAL "EP PLY THICKNESS	HUKNESS
S/N 15	TENSION	2		00			400	400 ⁰ F FOR 100 HRS	100 HRS	,,	400°F	400 ⁰ F FOR 30 MIN	N N		31.0%			0600		
II NIZRTS	N: 2		200	90	900	900	010	210	₽10 .	910	810	020	022	024	920	028	030 M	MAX	STRAIN	AREA
SPEC NO	T(1)	w [1]						5	STRESS - KSI	KSI							7		STRESS	2
S/N 15-41	980.	496	06.1	12.2	17.8	23.2	28.6	34.0	30.3	4.1	,							42.3	1910	9740.
27	8	98	0.80	12.0	18.0	24.0	29.8	38.4										38.0	.0128	9940
\$	790.	3	96.4	11.3	17.5	23.4	29.0	-										7.9	.0130	9
62	88	462	8.4	12.4	18.6	24.5	30.5	36.2	41.7	_								46.4	9510.	.04°33
8	.88	\$	8	12.1	18.3	24.1	30.0	35.9	41.1	-								46.4	.a.56	- Cells 2
3	8	ş	98.4	12.5	18.5	24.5	30.1	35.9	-					-				40.8	.0137	9990
28	.080	\$	8.5	12.6	18.2	24.3	29.9	38.6	41.3	46.2								47.5	.0166	1946
3 8	108 0	8	88.	11.9	8 (1	23.9	29.8	35.6	40.8						 			45.5	.0150	1946.
57	8	Į	98.5	12.6	18.3	24.4	30.2	36.1	41.3	0.84	,							47.1	.0162	0990
28	8	ş	06.2	12.4	18.7	24.9	30.6	38.4	41.7	47.5							•	48.4	.0164	09460
AVERAGE STRESS	ESS		6.1	12.3	18.2	24.1	79.7	36.3		-								47.3	9910.	
STANDARD DEVIATION STRESS	RESS		82	₽.	28	8.	1.01	1.16										4.87	18100	
AVEFAGE STRESS-30			5.9	П.О	9.0	21.7	78.7	31.8										32.7	.0112	

FOOTNOTES (1) TO NEAREST .001"

TABLE - AII-14 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	<u> </u>	TEST DIRECT	ECTION		SPEC	COND	SPEC. CONDITIONING	U	TE	TEST COND	Q.		RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 15, S/N7	TENSION	R/C		906			400	FOR 1	400°F FOR 100 HRS		400°F	400 ⁰ F FOR 30 MIN	2 2		31.0%		-	.0093		
STRAIN IN/IN	NI/F		200	90	8	800	010	210.	.014	910	810	020	.022	024	920	028	05).	MAX	STRAIN	AREA
SPEC NO	τ(1)	*							STRESS - KSI	KS				1		1		253	STRESS	z
S/N15- 102	680.	495	06.5	10.8	16.2	21.3	26.2	31.0	1									34.0	.0138	0740.
81	8	\$	06.3	10.8	16.0 ,	20.8	25.8	30.6	_									33.3	.0135	0470
1 01	8	8	8.8	11.2	16.3	21.8	27.0	32.0	1									32.4	1210.	0466
901	8 8.	8	8.38	11.3	16.6	21.7	26.8	31.7										32.1	06.10.	.0470
107	.082	96	06.1	12.3	17.3	22.4	27.6											31.4	01 15	.0456
801	.097	\$	06.2	10.4	15.8	20.8	25.6	1										28.4	1110.	.0480
901	8.	8	6.5	10.9	16.2	21.2	26.1	31.1							_			32.0	.0124	.0476
111	8 8.	9 8	7.98	4.1	16.3	21.6	26.5	31.7	1									33.9	.0130	.0 4 76
112	98	\$	06.7	10.5	;6:2	21.5	26.1	30.8	•	_								31.3	.0121	.0475
113	.097	.492	05.3	10.5	15.6	20.8	25.6	ı										30.2	6110	.0476
AVERAGE STRESS	ESS						<u></u>	DATA C	CONTINUED ON NEXT PASE	ED ON	NEXT	AGE								
STANDARD DEVIATION STRESS	RESS																 			
AVERAGE STRESS-3 <i>G</i>																	-			
									1	1	1	1	1	1	1	1	1			

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURPED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECCIRDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF CUMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - All-14 REDUCED TEST DATA

And the same

FANEE NO. Type FISS Test Test Direction SPC CONDITIONING Test CONDITIONI								TA CO	DNI-N	ED FRO	DATA CONTINUED FROM PREVIOUS FAGE	SCIOIN	AGE		_			-			
Tension		TYPE TI	EST	T.E.	ST DIR	ECTION	,	SPEC.	CONDI	TIONIN	و	T.	ST CO	Q	Œ	ESIN C	TNO	2	MINAL P	ERPLYTH	HICKNES
SPEC TION IN	, S/N15	TENSIC	z		°06			400	F FOR 1	00 HRS		400°F	FOR 34	NIMO		31.0%			.0093		
SPEC T(1) w(11) STRESS KSI 231 231 234 274 - 230 234 274 - 230 234 274 - 230 230 - 230 - 230 - 230 - 230 230 - 230 230 - 230 230 - 230 2	STRAIN IN	Z		200	900	900	800	010	012	014	910	810	020	022	024	-	820		MAX	STRAIN	AREA
25	SPEC	1,1							s	TRESS	KSI	i						- 8	5534	STRESS	2
1072 496 66.1 10.1 14.6 18.6 22.5 26.4 -		990		05.5			19.5	23.4	27.4	,									28.0	.0124	0329
1072 1484 1051 1086 14.3 19.1 23.6 28.0 -	22	.072		8.	10.1	10	18.6	22.5	26.4	,									28.9	.0135	.0356
073 493 06.4 11.7 17.0 21.1 26.4 - 9.6 22.8 26.7 - 9.6 23.1 26.4 - 29.1 26.1	88	.072		1.30	9.60		19.1	23.6	28.0	,									29.8	.0128	9320
070 488 06.4 11.7 17.0 21.1 26.4 - 9.0 20.0<	8	.073		8	10.0	14.5	18.6	22.8	26.7	,									29.6	.0136	0360
O70 498 06.7 11.5 16.0 20.6 25.0 29.2 - O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	070		8	11.7	17.0	21.1	28.4	<u>-</u> _										29.1	.0112	(342)
TRESS 5.6 10.8 15.9 20.7 25.4	Q	.070		7.90		16.0	20.6	25.0	29.2	,									30,9	.0128	.03 49
TRESS STRESS 38															_						
TRESS 5.6 10.8 15.9 20.7 25.4 20.8 1.16 1.56 20.8 20.8 20.8 20.8 20.8 20.8 20.8 20.8																	-				
TRESS 5.6 10.8 15.9 20.7 25.4 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0				7.51.00							-										
TRESS 5.6 10.8 15.9 20.7 25.4 31.0 STRESS .38 .69 .86 1.16 1.56 1.96 4.5 8.7 13.3 17.2 20.8 25.2																					
STRESS .38 .69 .86 1.16 1.56 1.96 1.96 1.96	AVERAGE STRE	SS3	7	5.6	10.8	15.9	26.7	25.4							-				31.0	.0125	
4.5 8.7 13.3 17.2 20.8	STANDARD DEVIATION STR	RESS		88	88	.86	1.16	1.55											38:	.00085	
	AVERAGE STRESS-30			4.5	8.7	13.3	17.2	20.8				-					-		25.2	6600	

TABLE - AII-15 REDUCED TEST DATA

PANEL NO.	TYPE TEST	.is	<u></u>	TEST DIRECTI	ECTION	_	SPEC.	CONDITIONING	TIONIL	ဋ	16	TEST COND	٥	œ e	RESIN CONT.	Ĕ	ğ	MINAL PE	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 10	COMPRESSION	RION		ક		-	1 Hr	₹0°F			8	-85°F For 36 Min	Min		31.0%		-	.0002		
STRAIN IN./IN.	./IN.		200	ş	900	900	010	210.	\$10 .	910	910	020	220	920	8	828	088	MAX	STRAIN	AREA
MPEC.	T(1)	w(1)						•	STRESS - XSI	5						1	<u> </u>		STRESS	Ĭ <u>₹</u>
171	8	.740	3.60	18.9	28.0	37.2	46. 0	52.1	4.08	4.98	73.0	,						76.7	1910.	0704
17	8	.740	98.6	16.8	26.2	33.0	40.7	48.7	66.5	63.0	70.0	_					,	74.6	.0194	.0674
,	080	.740	08.6	17.1	26.0	34.3	41.8	0.6	98.5	6339	70.8	78.5	ı				-	6.87	0201	.0674
188Y	8 6.	753	9.80	7.2	28.4	33.3	40.7	47.8	54.4	1							-	81.7	.0159	0000
1922	.08	.762	08.3	16.1	23.6	31.2	38.2	46.4	82.8	1.08	66.8	72.4	ı				'	72.9	0203	9690
212	.003	.751	07.7	16.1	24.0	32.7	40.4	48.0	1.98	62.3	688.9	75.5	١		,			78.5	.0211	.0999
215	000	.748	08.6	16.5	24.5	32.1	39.5	46.8	54.0	61.4	38.0 ⁽¹⁾	ı						72.4	0192(1)	0674
220	8	.748	98.5	16.7	242	32.0	38.4	46.5	63.7	61.5	0.69	-					,,	73.7	0194	නැය
m	8	750	07.8	15.9	24.8	34.8	45.4	54.6	62.1	ı								75.5	.0160	9040
226	.002	.748	08.7	15.3	23.2	31.0	42.1	52.3	63.2	1			•					67.3	.0152	8890
AVERAGE STRESS	ä		8.5	16.7	24.9	33.2	42.2	6.1	56.6									73.1	.0186	
STANDARD DEVIATION STRESS	RESS		.50	84	1.39	1.87	2.66	58	388									5.18	90200	
AVERAGE STRESS-30			7.0	13.8	20.7	27.6	34.2	40.2	45.6									67.8	.0124	

TABLE - AII-16 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	- F	ST DIR	TEST DIRECTION	2	SPEC	CONDI	SPEC. CONDITIONING	ō	1	TEST COND	è		RESIN CONT	ONT.	Š	NOMINAL PER		PLY THICKNESS
S/N 7. S/N 10 C	COMPRESSION	SION		₀ 06			-	1 Hr € -86 ⁰ F	٠ ٦		2 \$	-65°F For 30 Min	30 Min		31.0%	×.		1600.	-	
TRAIN IN /IN	Z / Z		.002	70 0	900	800.	010.	210	.014	310.	810	0%0	220.	.024	920	920	020	MAX	STRAIN	AREA
SPEC	T(1)	W(1)							STRESS - KSI	S									STRESS	Z.
S/N7 - 7	.072	.750	09.5	17.8	25.8	33.4	40.7	48.9	56.5	1								58.4	0154	.0540
82	.075	7.48	08.3	15.1	21.4	25.8	29.9	5.3.8	37.4	41.0	44.4	47.4	51.0	53.6	1			55.6	.0251	.0561
æ	920.	7.89	08.8	16.0	22.9	29.9	36.9	43.2	50.0	55.4							•	57.0	.0166	.0669
88	.074	7.	07.2	16.6	26.2	36.1	46.0	55.1	1									58.1	00130	.0554
9	.075	7.88	07.1	15.1	23.2	33.0	42.7	52.4	57.4	_								57.5	.0142	.0561
ð	.076	.750	07.2	14.0	21.0	28.1	34.8	41.3	47.4	53.0	58.5	!					•	6.65	.0199	0250
₩.	890.	.749	07.9	22.0	32.4	40.5	49.2	56.1	-									58.0	.0131	.0509
9	390	7.89	10.8	16.7	24.6	32.4	39.3	£.	57.0	1								58.3	.0144	6090
3.	88	7.	7.80	16.7	24.6	33.8	43.3	52.5	59.5	_								60 n	0142	6090
83	790.	.750	09.8	18.9	29.8	37.8	46.2	52.7	1								4.7	56.4	.0136	.0503
AVERAGE STRESS	iess						DATA		NUED	CONTINUED ON NEXT PAGE	T XT PAG	w.								
STANDARD DEVIATION STRESS	RESS															<u> </u>				
AVERAGE STRESS-3 O																				

FOOTNOTES (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECCRING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-16 RFDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

						3	3		-	DATA CONTINUED PROM THE VICUS PAGE	3	5								
PANEL NO.	TYPE TEST	EST	16	TEST OMBECT	ECTION	2	SPEC.	SPEC. CONDITIONING	TIONIA	ç	TE	TEST COND.	Ģ.	_	RESIN CONT.	ONT.	9	MINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
3/N 7, S/N 10	COMPRESSION	ME1044		5	908			1 Hr • 46°F	38°F		*	66°F For 30 Min	O MIN		31.0%				1900	
STRAIN IN /IN	N./IN.		.002	8	8	8	010.	210.	.0. ₽10.	910.	8 10.	020	220	20.	8	8	880	MAX	STRAIN	AREA
SPEC.	r(1)	W(1)							STRESS - KSI	5									STRESS	<u>.</u>
S/N 10 - 181 Y	980	0 <u>%</u>	06.5	17.1	24.8	7.22	403	47.3	54.3	ı								50.5	0167	0846
78.35	08 0	78	0.70	14.1	20.8	29.2	36.0	41.6	47.6	54.3	-							56.0	0710.	.0674
1867	780	9 2.	07.6	15.8	22.8	29.4	35.7	41.9	4.4	-								51.6	.0155	.0728
ž	.08	7.	08.6	10.4	25.1	34.7	43.7	52.0	59.6	-						,		5.68	2310	.0897
86 1	7007	750	80.3	16.7	24.4	31.4	39.2	46.0										53.0	.0138	.0688
197	8	70 10 10 10 10 10 10 10 10 10 10 10 10 10	08.2	16.0	23.4	32.1	40.0	47.2	54.5	60.3	_						- 1	64.C	1710.	9010
æ	786	.751	06.9	14.3	21.7	29.0	36.2	42.7	40.2	56.7	61.8	1		, <u>.</u>				64.8	.0193	1680
702Y	8 6.	Ę.	8 9.0	16.5	23.9	30.8	37.9	44.5	51.5	58.6	ı							818	.016R4	9680
302	8.	8	07.0	15.9	22.6	20.8	8.4	43.6	50.5	009	ı							61.8	0,,0	.0660
238	.003	.740	08.2	15.8	23.5	30.8	37.8	44.6	61.0	1								66.7	8910.	9890
AVERAGE STRESS	less		8.3	16.4	24.4	32.0	3.95	8.8										8.	.0361	
STANDARD DEVIATION STRESS	rRESS		1.03	1.79	2.83	3.47	4.63	8.8								 		3.17	98200	
AVERAGE STRESS-30			5.2	11.1	15.9	21.6	26.9	7.62					-			-		48.9	8700.	
											1	1	1	1	1	۱	1			

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRSSS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(1) CURVE (DEAL(ZED)

TABLE - AII-17 REDUCED TEST DATA

PANEL NO	TYPE	TYPE TEST		TEST	TEST DIRECT	CTION		SPEC. (OND	CONDITIONING	چ	1	TES! COND	Q	<u> </u>	RESIN CONT	CONT	2	NOMINAL PER		PLY THICKNESS
S/N7,S/N10,S/N11	COMPRESSION	ESSIO	z		00		95	95% RH @ 125 ⁰ F For 42 Days	125°F	For 47	Days	989	650F For 30 Min	O Min		31.	31.0%		8800	80	
STRAIN	2 7		-	700	ğ	900	800	010	210	014	910	810.	020	.022	0.24	920	820	930	NA/ V	LI RAIN	AHEA
SPEC	(1)		W(1)						S	STRESS	KSI									STRESS	Ž.
S/N 7 71	1.00.		.750	12.0	19.2	23.9	25.0	29.0	30.8	35.0	39.0	42.0	43.3	46.5	1				53.0	.0232	.0531
и	270.		750 10	10.2	18.5	9.92	38.0	42.6	1.04	£ €	1								55.4	3,10.	.0540
73	8.00.		.750 037.	07.5	15.2	23.6	29.0	34.8	40.0	45.1	47.7	54.5	58.9	63.3	1				0.79	.0226	.0585
75	070.		749 06	0.60	18.3	26.4	36.2	44.0	53.4	8.09	-								8 8.5	.0153	.0524
76	070	-	749	09.2	18.5	27.6	36.7	44.7	53.5	0.5	1								63.5	.0152	.0524
80	8	7. 0%	_	£ 6.90	17.8	26.8	36.4	44.2	53.5	9.19	70.5	1							73.6	.0163	9150.
61	8	.069 .750	-	10.4	19.7	29.8	4.	1											44.3	.0094	81 30.
28	.00	.070	.750	09.3	18.3	26.3	31.8	37 \$	43.3	49.1	-								50.1	.01 4 ≮	.0625
83	86		9	7.80	17.4	28.9	34.8	1.5	0.0	26.7	60.5	1							61.4	2910	7190
25	, O	157. 070.		8.6	17.1	29.	32.9	41.0	48.5	I									61.3	.0128	9290
AVERAGE STRESS	RESS							DATA	CONTI	NUED	CONTINUED ON NEXT PAGE	T XT PAG	iñ								
STANDARD DEVIATION STRESS	TRESS																				
AVERAGE STRESS-30																					
]	

FOOTNOTES (1) TO NEAREST .001"

(4) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(L) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES RECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-17 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

						3	3	3	ELC	DATA CONTINUED PHOM PREVIOUS PAGE	3	Y Y		į						
PANEL NO.	TYPE TEST	183	TE	TEST DIRECTI	ECTION	7	SPEC.	SPEC. CONDITIONING	TIONIL	ود	TE	TEST COND.	Ģ	ä	RESIN CONT.	NT.	NON	IINAL PE	HOMINAL PER PLY THICKNESS	ICKNESS
S/N 10 28 CO	COMPRESSION	RION		00		85	96% RH @ 125°F For 42 Days	1280	For 42	Days	486°F	-66°F For 30 Min	Z č		31.0%			.00888	ø,	
STRAIN . IN /IN	/IN.		5.23	8	900	900	010.	210	\$10 .	910.	810.	020	220.	0.24	0. 820.	0. 820.	0 CO	MAX	STRAIN	AREA
SPEC.	T(1)	w(1)							STRESS - KSI	3						-	,		STRESS	Ž.
S/N 10 214	000	.750	10.1	17.8	25.8	33.7	42.5	49.3	57.0	838	71.0						,	73.8	(1)2810.	.0675
3 2	980	.751	4.60	18.0	28.5	34.5	42.8	20.7	58.2	6.9	73.4	1					8	80.5	7810.	90.90
S/N 11 220	980:	.750	4.80	18.8	27.2	36.1	43.9	51.8	9.69	£7.5	,						,	710	.0169	.0837
222	060	.750	8.9(1)	8.9(1) 17.4(1)	(I) 26.8	3,5	€ 42	603	(E) 69.4	(E)	1						_	71.4	(II) 0710.	.0675
724	.083	.750	0.60	18.5	27.6	25.8	44.6	53.0	61.0	68.2	75.5	,				-	8	0.18	.0199	.0623
232	88	.751	69.7	17.8	25.4	34.1	41.9	49.7	57.6	67.0	1						,	70.8	9910.	9990.
236	8	.750	87.0	16.3	24.2	32.1	39.7	47.1	54.1	61.4	67.7	74.5	1				7	747	.0201	.0706
267	88	.749	88	17.9	26.8	1.8	43.5	51.2	59.0	4.98	73.3	1						73.5	0136	6990.
27.1	88	740	08.2	15.9	24.0	31.8	39.4	46.3	54.0	63.4	_						ψ	66.7	.0173	9990.
268	.089	.749	8.60	18.0	25.5	33.3	41.7	49.5	5.95	64.7	71.6						7	73.6	.0186	999a.
AVERAGE STRESS	S	105	9.2	17.8	26.0	33.9										-	9	0.99	:710.	
STANDARD DEVIATION STRESS	ESS		1.00	1.08	1.52	3.11							_				-	10.75	.00324	
AVERAGE STRESS-30			6.2	14.6	21.4	24.6												34.8	.0075	
SINESSIG													- 1		-			7	1 1 1 34.0	_

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-18 REDUCED TEST DATA

PANEL NO	TYPE TEST	EST	¥ —	TEST DIRECT	RECTION	2	SPEC	COND	CONDITIONING	2	1	TEST COND	Š.		RESIN CONT	TNO	Ž	MINAL P	ER PLY TI	NOMINAL PER PLY THICKNESS
S/N7,S/N10,S/N11 C	COMPRESSION	SION		6	900	ő	95% RH @ 125 ⁰ F For 42 Days	P 125°F	For 42	Days	, 8 8	-65°F For 30 Min	30 Min		31	31.0%	-	8800		
STRAIN IN	NI/ NI		200	904	900	900	010.	.012	0.14	910	810	020	022	024	97.0	028	030	MAX	STRAIN	AREA
SPEC	(1)	(r).W						5	STRESS - KSI	Ē				1				200	STRESS	
S/N 7 - 87	.074	750	9.70	16.2	23.8	31.9	40.0	47.6										5:1	0130	.0555
88	88	55.	89.3	18.0	26.7	37.1	46.7	54.5	ı									58.1	.0136	.0518
8	88	.750	98 6:	17.4	2.,5	33.6	41.7	1										44.9	.0106	.0518
92	88	748	98.5	17.1	20.1	41.9	ı											43.7	.0088	6090
\$6	990	750	89.3	19.5	31.7													32.0	7900	.0518
86	890:	.750	10.6	18.8	27.0	33.4	ı											35.B	.0093	01.90.
88	88.	35.	07.3	15.2	24.2	32.4	40.6	0.64	56.0	62.8	68.6	1						69.0	.0182	.0510
101	98	32	8 6	15.8	24.2	32.3	40.2	47.1	52.5	ı								53.5	.0:47	.0485
102	.067	8	07.2	14.7	23.0	30.3	37.9	4.3	51.8									55.5	.0150	.0502
103	883	750	15	21.2	31.4	49.2	47.5	55.0	1									57.0	5213.	.0510
AVERAGE STRESS	ESS						- o -	ATA C	DATA CONTINUED	JED ON		NEXT PAGE								
STANDARD DEVIATION STRESS	RESS																			
AVERAGE STRESS-3 G																	<u> </u>			

FOOTNOTES (1) TO NEAREST 001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVELAGES TRAITER OF FOMMORESSON FIRE OF INDIGER

TABLE - AII-18 REDUCED TEST DATA DATA DATA CONTINUED FHOM PREVIOUS PAGE

			-			5	CALL CONTINUED TROM THE VIOLE FACE		N 1		3									
PANEL NO.	TYPE TEST	FEST	F	TEST DIRECT	RECTION	2	SPEC.	SPEC. CONDITIONING	TIONIA	ភ្	16	TEST COND.	ġ	Œ	RESIN CONT.	DNT.	2	MINAL PE	NOMINAL PER PLY THICKNESS	HCKNESS
S/N7.S/N10.S/N11	COMPRESSION	SSION		G *	906	•	96% RH @ 1250°F For 42 Days	1250	For 45	\$ 0 2	8	66°F For 30 Min	O Min		31.0%				9800	
STRAIN IN./IN	IN:/IN.		.002	8	98	80	010	210.	20	910	810.	820	220	70	88	80	88	MAX	STRAIN	AREA
SPEC.	T(1)	(1) ^M						•	STRESS - ICSI	5					1				STRESS	7 <u>.</u>
S/N 10 233	060	1221	10.5	18.7	29.3	40.8	54.0	4.4	_									67.8	0128	.0675
236	.087	75.	11.5	19.9	27.9	35.6	907	51.4	-									0.89	9E 10.	.0863
239	190.	.751	10.0	18.3	26.7	33.7	41.6	46. 8	9.05	82.5	,							0.99	.0171	1880
244	8 6.	.751	11.8	7.22	31.6	39.6	8.8	54.1	-			-						60.5	0137	10684
247	8.	748	07.8	15.1	22.6	30.2	37.6	44.0	50.9	57.6	64.3	-		**			,	0.69	13 00.	.0704
182	.003	1.751	08.6	18.5	24.4	31.8	38.4	46.2	529	5.6.3	-							63.6	£710.	7080.
208	.887	.751	07.2	15.3	23.1	30.5	38.4	46.7	54.6	63.0	1	-						1.38	6710.	.0063
S/N 11 218	.083	.750	08.7	16.8	25.0	32.4	41.8	60	57.5	0.00	1				i			20.5	0175	.0623
240	90,	55	07.3	14.5	21.7	29.4	38.7	44.0	50.6	56.6	63.1	-						66.5	2010	2890
263	880	ρ R	10.5	18.3	26.6	34.4	42.1	₩3	57.5	1						1		62.5	.0166	0990
AVERAGE STRESS	RESS		9.1	17.8	28.3											-		67.5	\$10.	
STANDARD DEVIATION STRESS	TRESS		1.46	2.16	3.03													11.56	.00362	
AVERAGE STRESS-30			4.5	11.1	17.2									-				822	3000	7
												ĺ				l	1			

FOOTMOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFOXE FAILURE OCCURRED

IC) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AII-19 REDUCED TEST DATA

PANEL NO	TYPE TEST	EST	<u> </u>	ST DIR	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	U	TE	TEST COND.	ď	RES	RESIN CONT.		NOMINAL PER PLY THICKNESS	ER PLY T	HICKNESS
S/N 7, S/N 10, S/N 11	COMPRESSION	NOIS			8		86. 70.	95% RH @ 125 ⁰ F FOR 42 DAYS	125°F YS		25°F	25°F FOR 30 MIN	Z		31.0%				
STRAIN IN IN	Z .		005	§	٥٧٥	800	010	210.	10.	910.	.018	020	0. 220	.024	920 920	080	MAX	STRAIN	AREA
SPEC	τ(1)	W ⁽¹⁾						S	STRESS KSI	3							2	STRESS	y ≧
S/N 7 70	88	.751	08.2	14.8	25.0	32.6	41.0	6.8	5.6.5	,							62.3	(I) .0153	0130
74	270.	157.	07.6	16.4	22.0	27.0	32.6	37.8	43.9	50.2	57.0	1					58.8	.0186	.0564
7.7	.069	350	- - -	17.6	79.4	34.4	43.1	51.6									58.0	.0276	.0517
78	8	749	07.9	15.9	23.6	30.2	6 .	44.2	53.1								57.5	1310.	9090:
82	890	748	0.80	17.8	28.0	36.3	1.8	52.5									58.0	.0136	.0509
S/N 10 211	86	750	8.	13.7	27.8	37.0	-										40.6	0600	2170.
226	8	750	9.80	17.0	25.3	37.8	42.0										49.2	.01 18	.0705
S/N 11 209	06 0	750	8 	18.9	27.8	ı											36.2	0800	.0675
256	88	¥.	07.5	15.8	25.0	34.2	42.6	1.19	-								56.5	.0132	0990
276	8.	750	98.5	18.1													33.1	9900:	2070
AVERAGE STRESS	RESS		8.3	17.1													6.03	.0138	
STANDARD DEVIATION STRESS	TRESS		19	1.36													10.28	.00623	
AVERAGE STRESS-3 O			6.5	13.1													20.1		

(1) TO NEAREST .001" FOOTNOTES

TABLE - AII-20 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST		ST DIR	TEST DIRECTION	,	SPEC	COND	SPEC. CONDITIONING	۳	1	TEST COND	Ģ	_	RESIN CONT	ONT.	¥	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N7.S/N10.S/N11	COMPRESSION	NOTE			906	8	96% RH @ 125 ⁰ F For 42 Days	125°F	For &	Deys)R	25°F For 30 Min) Min		31.0			900.	•	
STRAIN - IN./IN.	IN./IN.		.002	8	8	900	010.	210.	\$10 .	.016	8 10.	020	220	A50.	820	82 0.	089	MAX	STRAIN	AREA
SPEC. NO.	T(1)	(1) M						•	STRESS	8				1					STRESS	ž
28 / NS	99 0.	748	08.3	16.9	24.0	32.0	40.1											43.4	.0114	.0616
6	880	.762	07.6	16.0	24.1	31.8	39.2	46.1	_									40.3	.0131	.0619
83	990:	.750	9.80	16.2	26.0	922	41.1	50.4	1									8.03	2210	.05 10
8	290.	.751	07.2	18.2	27.4	36.4	(I)	1										41.0	(1)	0604
8	36	761	57.72	16.0	25.0	33.8	629	61.8	-									53.8	.010	0611
S/N 11 212	88	.740	09.3	18.6	26.4	34.8	41.4	-							1			42.1	0104	.0846
286	88	.780	88	19.3	31.1	62.0	ı											46.5	9600	.0860
27.4	8 0	\$	9.80	17.4	28.2	36.0	44.5	-										46.2	1010	.0875
S/N 10 231	.00	.753	47.7	15.6	22.6	30.9	4.8	36.5	ı									46.5	.0126	.0700
237	9.	.761	07.8	17.0	28.9	36.8				V								36.3	.0162	.0706
AVERAGE STRESS	TRESS		8.0	17.1	28.9	34.6												46.4	8110	
STANDARD DEVIATION STRESS	STRESS		0.67	127	2.36	314												5.09	46100 .	
AVERAGE STRESS-3 O			6.0	13.3	18.8	28.2												1.06	1900.	

TABLE - AII-21 REDUCED TEST DATA

COMPRESSION 1N /1N T (1) W(1)						ONO	SPEC. CONDITIONING	٥	1	TEST COND	Ö		RESIN CONT	CONT	Š Š	INAL P	ER PLY T	NOMINAL PER PLY THICKNESS
r	-	00			96% RH	● 125 ⁰ F For	F For @	42 Deys		RT			31.0%			0600		
r T	005	_	900.	900	010.	.012	₽10 .	910.	810	0.00	220	.024	920	028	020	MAX	STRAIN	AREA
_	=						STRESS	IS :	1						,	25	STRESS	
.073 .750	0 07.5		15.6 24.1	1 30.9	88	\$6.0	50.6	1								54.4	.0140	.0647
.074 .750	0 07.7	.7 15.1	.1 22.7	7.72	33.2	88.	46.6	-								1.22	.0158	38.56
.073 750	0 07.9	9 15.5	.5 22.6	.6 30.4	37.5	4.	51.5	ı						1		53.0	.0145	.0547
031. ετα	90 0	8 17.6	.6 25.7	7.33.7	41.5	48.8	56.2	1								58.5	.0148	.0647
.073 .751	1 07.0	.0 14.2	.2 21.4	.4 29.3	36.8	43.5	50.5	1								50.1	1410.	9990
.076 .750	08.8	8 18.7	.7 28.0	.0 36.8	46.5	53.3	60.5	_								61.3	.0144	0.0670
.071 .750	0.89.0	.0 16.2	.2 25.5	.5 39.6	52.0	-										59.8	.0120	.0632
.068	1 16.7	7.00.7	7. 41.5	.5 47.6	53.6	59.4	-									5.63	.0126	.0620
.074 .751	1 090.0	0. 14.6	.6 31.0	0. 41.1	51.5	59.8										61.6	.0126	.0556
.0. .750	0 09.2	.2 17.6	.6 25.6	.6 33.4	40.4	47.7	56.7									58.0	₽910.	.0647
					8	DATA CONTINUED ON NEXT PAGE	TINUE	NOO	EXT P	AGE					-			
STANDARD DEVIATION STRESS																		

FOOTNOTES (1) TO NEAREST .001"

TABLE - AII-21 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

							۵	YY &	N L	JED FR	DATA CONTINUED FROM PREVIOUS PAGE	NOUS.	PAGE								
PANEL NO.	TYPE	TYPE TEST		TES	TEST DIRECT	ECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	SN.	11	TEST COND.	ND.		RESIN CONT.	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N7.S/N10.S/N11	COMPRESSION	ESSIG	ž	0	00		8	6% RH	●125°F	96% RH @125°F For 42 Days	? Deys	Œ	RT			31.0%			0000		
STRAIN IN IN	N1/ N1			200	8	8	8	010	210.	410.	910.	.018	020	220.	.024	920	820	080	MAX	STRAIN	AREA 2
SPEC	۱,1	T(1) W	W(1)							STRESS - KS	153 :					1				STRESS	ž
S/N11 219	3	.0885	.751	6.80	22.4	34.9	48.6	-											49.4	.0085	6 290
233	9,	100	0.57.	9.80	17.3	262	34.5	ı											40.0	.0095	0683
288	q	- 8 8.	187	8 8.1	16.4	24.8	33.0	41.6	40.1	57.8	1								59.7	.0152	0990
266	٩		.750	6.70	15.6	23.4	3*.4	39.3	47.0	54.6	1								58.6	0910.	0890
268	o,	. 689	05/	6.89	17.7	27.5	36.7	l							·				43.1	.0097	.0667
270	q		750	10.4	19.4	29.8	37.8	46.3	54.7	-									59.8	.0134	7990
S/N10 173	٩	. 880	187.	08.2	16.2	23.8	32.0	30.6	46.6	53.6	1.79	61.5					\		63.9	0192	0990
186	۲		15.	10.1	19.4	30.8	_												39.4	8700.	.0863
218	q	8.	.740	98.5	33	21.7	30.1	38.6	F9#	ł									51.4	.0136	1890.
230		7.	08%	8.70	15.5	25.8	36.7	46.6	54.0	1									64.9	.012B	9690
AVERAGE STRESS	TRESS			8.4	17.5	26.8													54.4	.0133	
STANDARD DEVIATION STRESS	STRESS		-	2.6	3.7	3.9												-	7.04	97200.	
AVERAGE STRESS-3 O				1.9	6.4	16.1													33.3	.0060	٠,٠
															1	1		1			

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-22 REDUCED TEST DATA

ESS		₫.			2	~	7	_~	ما				٥	Γ		
PLY THICKNESS		AREA		.0647	.0555	.0562	.0662	28.32	0646	.0650	0610	1990	.0670		_	
		STRAIN	STRESS	.0120	.0109	.000	.0083	.0122	¥£10.	9010.	6800	8700.	.0082			
NOMINAL PER	0600:	MAX	200	0.8	45.0	47.7	46.2	47.3	4.84	47.5	47.4	42.7	# 2			
Z	ļ	.030														
CONT	*	028														
RESIN CONT	31.0%	920.														
		024														
Ö		220														
TEST COND	RT	020												GE		
=	6	810												NEXT PAGE		
g g	Days	910	KS)				NO NE		
SPEC. CONDITIONING	For 42	014	STRESS KSI					-	-					CONTINUED ON		
CONDI	9 125 ⁰ F	210	S	1	,			46.5	45.7	ı				TNOO V		
SPEC	95% RH @ 125 ⁰ F For 42 Days	010		44.7	43.0	ı	-	42.3	38.6	46.0	-		_	DATA		
	86	800		42.1	36.2	42.1	6.0	36.0	30.0	37.7	1,4	ı	43.7			
YEST DIRECTION	N	906		39.0	29.5	33.1	34.6	28.1	6.22	29.0	32.9	34.0	34.2			
ST DIR	°06	904		31.8	21.0	23.€	23.2	20.9	15.3	19.7	1.22	23.2	24.0			
YE!		000		17.0	11.9	12.0	11.5	12.4	7.70	4.00	09.3	12.1	12.0			
ST	NO		W(1)	.750	750	.750	.750	750	74	.751	751	.751	.751			
TYPE TEST	COMPRESSION	z	τ(1)	.073	4 00.	.075	.075	170.	.073	.073	980	970.	076	s	S S	
F		2 2												AVERAGE STRESS	STANDARD DEVIATION STRESS	L
Q Z	U.S./N1	STRAIN	SPEC	3	10	7	Æ	61	2	22	23	ĸ	8	RAGE	STANDARD	AVERAGE STRESS-30
PANEL NO	S/N7, S/N10,S/N11	J.	ひき	S/N/2										AVE	STA	AVE

FOOTNOTES (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-22 REDUCED TEST DATA DATA DATA CONTINUED FROM MEVIOUS PAGE

							-				1				-			-			
DANEL NO.	TYPE	TYPE TEST		TES	TEST DIRECTI	CTION		SPEC.	COND	SPEC. CONDITIONING	9	F	TEST COND	NO.	_	RESIN CONT.	CONT.	Ž	MINAL PI	ER PLY TH	NOMINAL PER PLY THICKNESS
S/N7 S/N 10 S/N 1	COMPRESSION	E 25 30	Z	0	90 ₀		56	F RH	1250	96% RH @ 125 ⁰ F For 42 Days	2 Days		m			<u> </u>	31.0%		0600		
STRAIN IN./IN	IN./IN			200	8	ğ	8	010	210.	10.	310 .	\$10.	020	220	728	828	828	020	MAX	STRAIN	AREA
SPEC NO.	T(1)		W(1)		1			1		STAESS . KS	B					1				STRESS	ž
S/N 11 217	8	7.	.740	7.5	15.3	23.6	31.4	38.5	48.6	1									6.00	0133	.0646
525	8	7.	.750	8.9	18.7	878	44.3	63.1	-										0.38	0100	.0630
872	8	7.	.746	98.4	18.3	28.2	38.9	46.6	-										48.9	.0106	2990
238	ă	.7	.740	1.80	16.2	242	31.8	38.4	46.7	t									51.7	.0146	9990
2962	80		.753	1.88	15.2	822	30.9	38.4	44.3	-									42.3	0140	0670
3 2	8	.7	.749	282	16.6	24.1	31.1	38.4											54.6	.0137	0990
272	88		.762	67.9	16.4	25.6	33.3	1											38.7	0010	9990
S/N10 240	8		.750	88.3	12.0	27.5	38.2	ı											42.0	7600	1880
243	8.		.781	6.70	16.9	27.5	36.3	47.3	54.4	1									1.99	.0131	0683
246	7967		750	10.9	22	32.6	43.0	ı											43.9	9800	8890
AVERAGE STRESS	TRESS	1	8	6.9	19.6	29.3													47.3	0110.	
STANDARD DEVIATION STRESS	STRESS		7	2.46	4.30	4.62													4.73	.00213	
AVERAGE STRESS-30			-2	2.5	8.4	15.4													33.1	9900.	

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-23 REDUCED TEST DATA

NOMINAL PER PLY THICKNESS		D30 MAX STRA'N AREA	STRESS		46.5 .0141 .0659	.0141	.0141	.0146	.0141 .0136 .0136	.0136 .0136 .0136 .0136	0136 0136 0136 0136 0137	0136 0136 0136 0136 0137 0137	0136 0136 0136 0136 0137 0137 0138	1410. 10272. 10136. 10136. 10136. 10136.	0136 0136 0136 0136 0136 0136	1110. 10136 10136 10136 10136 10136 10136 10136
8		028 030				3 -	 		 							
-		024 026				43.4 46.3				- - - - - - - - - - 	-+ +++ +	-+ 	╼╄╼╌╂┈╌╄═╌╂┈╌╂┈╌┥	╶ ┿┈┤ ┈╽┈┢┈┢┈┢┈ ╋┈╇┈╇┈╇┈	╶ ┿┈┤ ┈╽╶┢┈ ╅┈╋╌╌╃┈╂┈┼┈╂┈	╶ ┼┈┤ ┈┆╶╞┈╏┈ ┼┈┼┈┼┈┼┈╂┈┼
	r 30 Min	220. 0				39.7 41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	11.5	11.5
	160 ⁰ F For 30 Min	020 810			_	37.8 39	\rightarrow		 	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + - +				 	
		. 910.	S · KSI		_	8.4	4.88	8 -	8 .	88 1	8 1	8	8 1 1	8 1 1 1	8 1 1	8 1 1 1
		10.	STRESS - KSI	46.5	- 1	1 1	1 1 .									
		.012		30.6		31.7	31.7	31.7	31.7	38.4 44.6	31.7 46.7 38.4 42.1 44.6	31.7 46.7 38.4 42.1 44.6 51.1	31.7 46.7 44.6 43.5 46.4	31.7 42.1 42.1 43.5 43.5 43.6 46.4	31.7 46.7 42.1 42.1 43.5 43.5 43.5 43.5 43.5 43.5 43.5 43.5	31.7 46.7 42.1 44.6 43.5 43.5 43.5 43.5 45.6
	None	010		33.6		30.0	30.0	36. 2 36.2 37.8 38.2	8 8 30 8 8 8 98	30.0 36.8 37.8 37.6	30.0 36.6 37.6 37.6	30.0 38.2 38.8 37.6 37.6 43.6 36.7	30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0	30.00 30.00	30.0 39.2 36.6 37.6 43.6 43.6 43.6 43.6 36.7 36.7 37.2	30.0 39.2 36.6 37.6 43.6 43.6 43.6 36.7 36.7 37.2 37.2
		8		26.4		27.7	32.4	32.4	27.7 32.4 27.3 28.3	27.7 32.4 27.3 28.3 31.0	27.7 32.4 27.3 28.3 31.0	27.7 27.3 28.3 31.0 36.4 29.8	27.7 22.4 28.3 28.3 31.0 35.4 36.4 36.4	27.7 22.4 27.3 28.3 31.0 35.4 29.8 31.6	27.7 22.4 27.3 28.3 31.0 35.4 36.4 36.4 36.4 36.4 36.4 36.4 36.4 36	27.7 22.4 27.3 28.3 31.0 35.4 36.4 36.4 36.4 30.3 30.3
		8		19.9		20.9	20.9	24.4	24.4 20.6 20.2	24.4 20.6 20.2 20.2 22.6	20.5 24.4 20.6 20.2 22.6 27.0	20.5 24.4 20.6 20.2 22.6 27.0 27.0	20.9 24.4 20.6 20.2 22.6 27.0 27.0 27.0	20.9 24.4 20.2 20.2 22.6 27.0 27.8 24.1 24.1	20.9 24.4 20.2 20.2 27.0 27.0 27.8 27.8 24.1 24.1	20.9 24.4 20.2 20.2 27.0 27.0 27.8 27.8 27.8 27.8 25.6
	8	8		13.4		13.9	13.9	17.0	13.9	13.9 17.0 14.1 12.7 15.2	13.9 17.0 14.1 12.7 15.2 15.2	13.9 17.0 14.1 12.7 15.2 19.1	13.9 17.0 14.1 14.1 15.2 15.2 15.1 15.1	13.9 17.0 14.1 12.7 15.2 15.1 15.1 15.1	13.9 17.0 14.1 12.7 15.2 15.1 15.1 15.1 15.4	13.9 17.0 14.1 12.7 15.2 15.2 15.1 15.1 15.4 15.4
		005		06.8	8	-	+			++						
	NOIS		W(1)	.749	748	⅃	1	1 1	1 1 1	1 1 1 1 1						
TYPE TEST	COMPRESSION	2	T(1)	.088	.087		.088	88 89	.088 .088 .092	.088	.088 .0892 .0893	.098 .093 .093 .093	.089 .090 .093 .090 .090	.090 .093 .090 .090 .090		88 890. 1900. 1900. 1900. S
PANEL NO T	S/N10 CO	STRAIN IN /IN	SPEC	Y271	1767		2771	1772	2771 88: 190Y	1772 186 190Y 194Y	1772 186 190Y 194Y	1772 186 190Y 194Y 209 218	1772 186 190Y 194Y 209 209 218	1772 186 1907 1947 209 209 218 218	1772 1907 1947 209 218 223 228 AVERAGE STRESS	1372 1967 1947 1947 209 218 223 228 AVERAGE STRESS DEVIATION STRESS

FOOTNOTES (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-24 REDUCED TEST DATA

S/N 10 COMPRESSION 90° ODG ODG OTD OTD OTG	PANEL NO. TYPE TEST	TEST		TEST DIRECTI	RECTION	z	SPEC	SPEC. CONDITIONING	TIONIN	ā	16	TEST COND.	و و	_	RESIN CONT	PNO	ž	MINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
1) W(1)	COMPRE	SSION		906			None				180	160°F For 30 Min	Z Z		31.0%			1000		
W H W H STRESS STR			.002	—	8	8	010	210.	410.	910	810.	020	220	70.	920	920	089.	MAX	STRAIN	AREA
066 746 08.9 17.7 25.8 33.0 39.2 - 082 7.46 07.9 15.7 26.3 36.6 - - 086 7.4 05.9 11.1 16.9 22.6 27.9 33.0 - 080 7 05.6 11.6 18.7 26.8 32.5 35.8 38.0 091 750 05.5 11.3 17.8 24.5 31.2 37.0 - 090 748 06.0 12.5 22.3 33.6 30.6 - - 090 748 06.0 12.5 22.3 33.6 30.6 - - 090 748 06.0 12.6 22.3 33.6 37.3 40.3 091 748 06.3 11.2 16.9 21.8 24.7 29.6 35.7 40.3 20.4 22.8 36.4 28.7 36.7 36.7 40.3			_					•	TRESS	9								2 1 1 5 3 3	STRESS	N.
096 7.46 07.9 15.7 26.3 36.6 — 096 7.4 05.6 11.1 16.9 22.6 27.9 33.0 — 090 7. 05.6 11.6 18.7 25.8 32.5 35.8 38.0 091 750 05.5 11.3 17.8 24.5 31.2 37.0 — 090 748 06.0 12.5 22.3 33.6 30.6 — — 092 748 06.1 12.0 18.4 25.6 33.0 41.0 — 092 748 05.1 14.4 21.7 29.0 34.5 37.3 40.3 094 748 05.3 11.2 16.9 21.8 24.7 29.6 36.7 40.3 20.4 22.6 23.4 48.3 36.7 36.7					25.8		39.2	ţ										42.4	0110	480
086 748 05.9 11.1 16.9 22,6 27.9 33.0 - 080 72 06.6 11.6 18.7 26.8 32.5 36.9 38.0 081 750 05.5 11.3 17.8 24.5 31.2 37.0 - 080 748 06.0 12.5 22.3 33.6 - - - 090 748 06.1 12.0 18.4 25.6 33.0 41.0 - 092 748 05.1 14.4 21.7 29.0 34.5 37.3 40.3 091 748 05.3 11.2 16.9 21.8 24.7 29.6 36.7 104 2.2 3.48 48.3 36.7 36.7 36.7					26.3		-											41.7	9600	6890
080 77 06.6 11.6 18.7 25.8 32.5 36.8 38.0 081 .750 05.5 11.3 17.8 24.5 31.2 37.0 — 080 .740 06.0 12.5 22.3 33.6 — — — 080 .740 06.1 12.5 22.3 33.6 — — — 084 .740 07.1 14.4 21.7 29.0 34.5 37.3 40.3 091 .740 05.3 11.2 16.9 21.8 24.7 29.6 36.7 401 .740 22.6 33.6 48.3 36.7 36.7 401 .740 22.6 23.46 48.3 36.7 36.7					16.9		27.9	33.0	-						·			37.3	0140	.0710
081 .750 05.5 11.3 17.8 24.5 31.2 37.0 — 080 .760 06.8 11.7 19.2 31.4 — — — 080 .748 06.0 12.5 22.3 33.8 39.6 — — 084 .748 06.1 12.0 18.4 25.6 33.0 41.0 — 092 .748 07.1 14.4 21.7 29.0 34.5 37.3 40.3 091 .748 05.3 11.2 16.9 21.8 24.7 29.6 35.7 6.4 12.9 20.4 28.4 36.7 36.7 36.7 1.18 2.26 3.48 4.83 9.0 36.7					18.7		32.5	36.8	38.0									39.0	7910	.0874
080 .750 05.8 11.7 19.2 31.4 - - 080 .748 06.0 12.5 22.3 33.6 - - 084 .748 08.1 12.0 18.4 25.6 33.0 41.0 - 092 .748 07.1 14.4 21.7 29.0 34.5 37.3 40.3 091 .748 05.3 11.2 16.9 21.8 24.7 29.6 36.7 6.4 12.9 20.4 28.4 38.4 36.7 1.18 2.26 3.48 4.83 36.7					17.8		31.2	37.0	ı									41.7	0130	0883
.080 .748 06.0 12.6 22.3 33.6 39.6 - .084 .748 06.1 12.0 18.4 25.6 33.0 41.0 - .082 .749 07.1 14.4 21.7 29.0 34.5 37.3 40.3 .091 .748 05.3 11.2 16.9 21.8 24.7 28.6 36.7 .64 12.9 20.4 28.4 36.4 36.7 11.18 2.26 3.48 4.83 36.7				$\overline{}$	19.2		ı											38.6	9800	.0683
DB4 748 08.1 12.0 18.4 25.6 33.0 41.0 — 002 748 07.1 14.4 21.7 29.0 34.5 37.3 40.3 D91 748 05.3 11.2 16.9 21.8 24.7 29.6 36.7 64 12.9 20.4 28.4 3.48 3.48 4.83 3.48				-	22.3		39.6	1										44.9	3110.	£780
0002 7.46 07.1 14.4 21.7 29.0 34.5 37.3 40.3 2091 7.48 05.3 11.2 16.9 21.8 24.7 29.6 35.7 6.4 12.9 20.4 28.4 29.6 36.7 1.18 2.26 3.48 4.83 3.48	_				18.4		33.0	41.03	ı			-						48.0	₽ €10.	20703
0.091 .748 0.6.3 11.2 16.9 21.8 24.7 29.6 36.7 6.4 12.9 20.4 28.4 36.7 3	1				21.7		34.5	37.3	40.3	44.6								46.4	.0162	790
6.4 12.9 20.4 1.18 2.26 3.48					16.9		24.7	29.6	36.7	41.5	-							43.5	1910 .	0880
1.18 2.26 3.48	ERAGE STRESS		3	12.9	20.4													42.2	0130	
	NDARD		1.18															334	09200	
AVERAGE 2.9 6.1 10.0 13.9	ERAGE IESS-3 O		2.9	2	10.0													32.2	-300	ė.

TABLE - AII-25 REDUCED TEST DATA

RESIN CONT. NOMINAL PER PLY THICKNESS	lin 31.0% .0091	022 024 026 028 030 MAX STRAIN AREA	STRESS	47.6 .0115 .0563	0150. 0075 .0510	45.3 .0128 .0548	49.3 .0098 .0547	48.4 .0078 .0532	0540	46.2 5078 .0540	49.1 .0082 .0585	48.6 ,0163 ,0540	42.0 .0080 .0571			
TEST COND	160 ⁰ F For 10 Min	020 Rt 3												EXT PAGE		
S C		910	. KSI									1.0		DATA CONTINUED ON NEXT PAGE		
SPEC. CONDITIONING	5°F	410.	STRESS - KSI			1						8 .		I DNTINU		
CONE	95% R.H. @ 125°F For 42 Days	.012		1		42.9						43.4		ATA O		
SPEC	95% R. For 42	010		43.2		36.7					-	4.0				
		8		36A	1	29.6	1.6		43.4	-	4.84	37.0	1.11			
ECTIO		98		29.7	29.4 ,	22.6	₩.	39.6	33.3	98.9	7.98.7	34.3	34.7			
TEST DIRECTION		Š		22.0	27.0	16.8	24.5	28.0	23.4	25.6	25.2	25.8	25.2			
TE	00	000		13.0	13.0	08.8	12.6	13.3	11.7	10.0	12.3	1.88	14.7			
ST	SION		(L) M	.750	.750	.751	.750	740	.749	750	750	740	.740			
TYPE TEST	COMPRESSION	z	τ(1)	.075	.068	.073	.073	170.	₽ 20.	270.	870.	.072	980	s	a	
PANEL NO TY	S/N 7, 10, 11 CO	STRAIN IN IN	SPEC	S/N 7 174A	175	A771	178	183A	184	187	189A	190	191	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AII-26 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

						3			CALLA CONTINUED FROM FRE VICOS FACE											
PANEL NO.	TYPE TEST	EST	TE	TEST DIRECT	ECTION		SPEC.	CONC	SPEC. CONCITIONING	ور		TEST COND.	₩Ď.		RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 7 10, 11	COMPRESSION	SSION		00			15% RH	126	85% RH ● 125 ⁰ F For 42 Deys	2 Days		160 ⁰ F For 10 Min	Z i		31.0%			1800.		
STRAIN IN./IN	IR./IN.		200	8	98	900	010	210.	\$10°	910.	810.	020	220	1024	.026	8Z0	020	MAX	STRAIN	AREA
SPEC	(1)	W(1)							STALES - KG	3								2011	STRESS	N.
S/N10 172	960	197.	7.80	18.0	0.12	36.1	43.5	1										43.9	0106	.0712
7.11	95 98	751	7.80	17.4	27.6	34.4	41.0	46.9	1									46.3	.0123	9890
217	160.	.750	09.1	18.3	27.3	-												33.6	0800	0883
529	.093	749	07.2	14.8	25.2	34.9	l .											38.0	8900	9690
S/N11 210	8 6.	.740	10.	20.5	30.3	38.6	_											43.3	8600	.0874
223	.085	.75	0.80	17.0	26.8	36.0	46.5	ī										49.9	.0115	9890
234	.002	750	8.	17.3	27.0	36.4	9727	_										46.5	0110.	0680
236	86	28	07.2	14.1	22.5	29.6	36.5	i										40.7	0110	.07 12
257	.087	.750	98.6	16.6	25.4	33.2	39.9	ı										44.6	20115	Z990°
265	990	.748	09.5	18.9	0.72	34.5	41.0	47.4	ı				-	;	-			50.6	.0134	9990
AVFRAGE STRESS	RESS		10.4	20.8	30.2	_	-	ī										45.9	.010 .	
STANDARD DEVIATION STRESS	TRESS		2.26	4.42	5.40													5.39	.00229	
AVERAGE STRESS-3 <i>G</i>			3.6	6.5	14.0													29.7	9500.	

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-26 REDUCED TEST DATA

CHNESS		AREA	٠ ا <u>۲</u>	.0663	.0663	39965	.0663	.0555	.0570	.0509	.0611	.0504	.0494			
R PLY TH		STRAIN	STRESS	.012E	3600.	.0114	9600:	.0144	6110	1.700.	9900	9010.	0700.			
HOMINAL PER PLY THICKNESS		MAX		36.6	37.2	37.0	34.2	38.6	88.1	39.0	41.1	36.2	78.0			
2		030														
TNO	عد	920														
TESIN CONT	31.0%	920														
L		920					· · · ·									
و ا	0 Min	220.														
TEST COND	160 ⁰ F For 10 Min	020												36		
1	160°	810												XT PA		
ى ن		910.	KSI											DATA CONTINUED ON NEXT PAGE		
SPEC. CONDITIONING	L.	0.14	STRESS - KSI	1				37.3						INCED		
CONDI	● 125 ⁰ Bys	012	, is	34.7		1		33.0	1			1		CONT		
SPEC.	95% RH @ 125 ⁰ F For 42 Days	010		30.2	_	33.4	_	28.5	34.2			34.2		DATA		
	ه پر	800		25.6	32.4	26.5	28.2	24.2	28.4		-	28.8	1			
CTION		900		20.2	25.6	19.6	23.1	18.6	22.8	38.4	39.2	22.6	34.0			
TEST DIRECT		8		13.7	18.1	13.3	16.0	12.6	16.8	26.6	28.6	15.7	8.46			
TES	%	700		9:90	9.60	06.5	08.5	06.5	4.	8.4	15.3	8.70	12.9			
<u> </u>	NO		W(1)	750	.750	.750	750	.751	.751	7.49	.751	.751	.749			
TYPE TEST	COMPRESSION	z	۲(۱)	270.	.075	.074	.075	.074	.07¢	88	88	.067	990:		93	
1		N .												STRESS	STRES	
0,	11N/S'	STRAIN	SPEC NO	2	æ	80	51	18	8	15	57	8	62	AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-30
PANEL NO	11N/S'01N/S'2N/S	S	ઝૅ	S/N7					l					AVE	STAN	AVE

TABLE - AII-26 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

			-									3	2					+			
PANEL NO.	TYPE TEST	TEST		TEST	TEST DIRECT	TION		SPEC. CONDITIONING	LIGNO	TIONI	តិ	ī	TEST COND.	Ö	93	RESIN CONT.	CONT.	ž	DMINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
TINZGINZ LNZ	COMPRESSION	0155	7	906			8 L	96 RH @125 F For 42 Days	125 ^d F			1600	160 ⁰ F For 10 Min	Min		31.0%					
STRAIN IN./IN	IN./IN.		.002	-	100	98.	8	010	210	410.	910.	810.	020	222	.024	920	928	880	MAX	STRAIN	AREA
SPEC	1(1)		(L) A	1	-				b	ETRESS - KSI	<u> 5</u>						1		SI HESS	STRESS	N. I≧
S/N10 190	880		7.70 127.		15.9	232 3	30.3												36.8	6800	0880
232	680		.751 08.5		17.5	26.0 3	2.2												0.00	8800	9990
234	8.	7.	.752 10.2	-	19.9	28.8										·			33.5	4/00.	.0676
236	68 0°		.748 07.5	\vdash	16.3	24.8 3	32.8	_											0.65	9800	.0867
341	.001		e 70 GPT.		16.4	25.0 3	32.9	42.3	44.6	1									46.7	.0137	1990
246	.080		.750 08.1		17.9	27.0	36.0	1											42.4	9600	.0867
S/N11 214	980		750 08.7		19.6	29.8	39.6					-							46.5	9600	3480.
226	.084		.750 07.3	_	16.5	25.4 3	33.0	-											33.3	.0083	0630
280	780		3,01 037.	\rightarrow	20.9	31.9 3	39.9												41.3	0086	.0862
273	.088		.750 08.6		18.6	27.7	38.8	€0.0	-										46.0	9010.	0990
AVERAGE STRESS	TRESS		9.1		18.2	28.5													7.98	9800	
STANDARD DEVIATION STITESS	STINESS		2.54	_	18.2	6.40													4.18	12200	
AVERAGE STRESS-3 O			1.5	6.0		10.3													28.1	.0033	
																	1	1			

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-27 REDUCED TEST DATA

TYPE TEST TEST DIRECTION SPEC CONDITIONING COMPRESSION 0° 100 Hrs # 400°F	NOIL	NOIL	NOIL		SPEC CONDIT	CONDIT		ONING	u	TE.	TEST COND.	ů ž	<u> </u>	RESIN CONT	T NO	Ž	AINAL PI	ER PLY T	NOMINAL PER PLY THICKNESS
002 004 006 008	004 006 008	800 900	800	<u> </u>	1 9	010	210	 	910.	810	020	022	024	970	920	88		STRAIN	
W(1)			1		1	1	ST	STRESS . KSI	KSi			1					STRESS	AT MAX STRESS	ا <u>ک</u> د
.748 06.9 13.1 19.7 26.2	13.1 19.7	19.7	7	26.2	<u></u>	34.0	 I							 			33.6	.0103	3990.
.748 07.2 14.0 20.8 27.1	14.0 20.8	20.8	8	77.1		33.2											34.3	.0103	9990
.749 07.5 14.7 22.8 -	14.7 22.8	22.8	<u>ø</u>				_										28.0	.0072	0644
.748 08.2 16.6 22.6 29.2	16.6 22.6	22.6	ų.	20		8.8	1						-				37.8	.0106	8590:
.747 .09.6 19.0 -	19.0	$\overline{}$															26.8	.0054	.0867
.749 07.5 14.4 20.8 26.8	14.4 20.8	20.8	8	89		33.0	1.08										€.6	.0140	9680
.748 06.1 14.2 21.0 28.8	14.2 21.0	21.0	0.	88		1											30.6	9800	¥190.
.748 07.3 14.4 21.0 27.2	14.4 21.0	21.0	Q.	272		1											29.5	.0087	36895
748 07.4 15.3 22.1 28.0	15.3 22.1	22.1	-1	0.82		8									-		37.1	.0112	6890
748 06.6 10.9 17.4 24.7	10.9 17.4	17.4	₹.	24.7		-											26.2	.0085	.0673
7.3 14.7		14.7			\vdash										<u> </u>		32.8	.0085	
1.09 2.17		2.17				'											6.04	.00236	
4,0 8.2		8.2				-											14.7	.0024	

TABLE - AII-28 REDUCED TEST DATA

COMPRESSION 90° 1006 1006 1006 1006 117	.000 010 000 010 010 010 010 010 010 010	Min 31.0%	O MAX STRAIN STRESS AT MAX STRESS 15.4 D123 19.9 .0078	L
STRAIN IN	STRESS - KSI 11.7 13.7 15.4	.026 .028	MAX STRESS 15.4	Ц
5 .072 .752 05.0 07.2 08.4 11.7 13.7 11074 .750 06.7 11.4 16.8	11.7 13.7 15.4			AREA
5	11.7 13.7 15.4			
.074 .750 06.7 11.4 16.8073 .750 06.1 11.0 16.1075 .751 08.1 15.1076 .750 08.6 13.0077 .749 08.5 13.5075 .750 06.3 10.9 16.2				1490
.073 .750 .05.1 11.0 16.1 .075 .751 .08.1 .076 .750 .08.6 13.0 .072 .749 .08.5 13.5 .075 .750 .05.3 10.9 16.2				9990
.076 .761 00.1 –				780
			15.1	98
.072 .749 08.5 13.5075 .750 05.3 10.9 16.2			16.3 .0062	267.
.075 .750 05.3 10.9 16.2			19.3	87
			-	2980
- 64078 .750 03.9 10.2 15.4 -			19.9 0000	98.
47 .075 .750 04.6 09.8 15.8 20.2	20.2		21.3 0082	20900
52 .749 06.5 12.6 18.3 23.8 -			24.6 .0088	6090
AVERAGE STRESS DATA CO	DATA CONTINUED ON NEXT PAGE			
STANDARD DEVIATION STRESS				
AVERAGE STRESS-30				ļ —

TABLE - AII-28 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

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PANEL NO.	TYP	TYPE TEST		TE	TEST DIRECT	ECTION		SPEC	COND	SPEC. CONDITIONING	NG	Ĭ	TEST COND.	ND.		RESIN CONT.	CONT	Ž	DMINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N10,S/N 7	COMP	COMPRESSION	Š		906			400 Hr	400 Hrs ● 400 ⁰ F	J.		,00 4	400°F For 30 Min	0 Min		31.0%					
STRAIN IN./IN	IN./IN.			200	8	900	8	010	.012	410.	910	810.	020	220	₽20:	920	028	830	MAX	STRAIN	AREA
SPEC NO.	-	(1)	W(1)							STRESS - KC	9								201	STRESS	7. Z
S/N10 180Z	٦,	.088	.749	98	12.8	18.4	25.6	١											28.2	6800	.0869
1812	9	980	.750	282	12.6	18.8,	24.8	30.2									<u> </u>		32.6	0103	3846
1837	٦,	.091	.750	08.7	12.9	(i) 18.9	(I) 24.6	29.3	380	904									43.9	.0153	.0683
1842	3.	200	.740	07.0	13.5	19.4	25.0	1											28.2	80.	D704
191	y.	000	748	08.0	17.5	_													20.1	8400	.0673
198	٠,	880:	.740	4.8	12.8	19.1	24.6	30.1											32.5	0113	.0869
200Y	. J	8	.750	8	19.8	20.0	I												34.9	9900	.0683
2022	٠,	<u>8</u>	7.80	07.5	15.0	22.0	24.6	36.0											39.6	.0114	1880
205	,	19	8.	07.8	14.5	21.2	27.6	1											33.4	.0000	1980.
242	٩	8	.750	8	12.5	18.7	24.6	30.8										,	31.2	.010	.0082
AVERAGE STRESS	TRESS			5.															26.8	1800	
STANDARD DEVIATION STRESS	STRESS			1,58															8.27	8/200.	
AVERAGE STRESS-30				4:															0.1	908:	

FOOTNOTES: (1) TO NEAREST .001"

TABLE - AII-29 REDUCED TEST DATA

PANEL NO.	TYI	TYPE TEST		TES	TEST DIRECTIO	ECTIO	Z	SPEC	COND	SPEC. CONDITIONING	NG NG	F	TEST COND.	NO.	-	RESIN	RESIN CONT.	2	NOMINAL PER	ER PLY T	PLY THICKNESS
S/N 7, S/N 13	PANE	PANEL SHEAR	AR			8			NONE			90	66° F FOR 30 MIN	MIN.	-	31.0%					
STRAIN - IN./IN.	N.	نِـ ا		ğ	8	210.	.016	62 9	8	820	283	8	8	ş	3	8.	8	8	MAX	STRAIN	AREA
SPEC. NO.	Ť	1(3)	(E) A							STREE	₫								SINESS	STRESS	× . I <u>¥</u>
S/N 7 -2		8	3.876	\$70	14.0	17.2	<												21.6	<	268
7.4	-	88	3.876	9.80	14.2	16.6	<] [17.9	<	1
\$	-	220:	3.876	67.0	13.7	17.3	<												19.0	<	972.
-	_	.076	3.876	080	13.4	17.3	19.4	*											19.7	<	182
S/N 10 - 42		28	3.875	07.7	13.7	16.9	18.2	19.4	20.0	20.8	21.4	22.0	22.8	<					24.4	<	.318
S/N 11 - 24	-	000	3.875	96.5	11.6	15.0	17.0	18.4	19.3	20.0	20.5	20.8	20.9						20.9	8120.	348
42		38 0	3.875	8.70	12.7	15.7	17.2	18.0	18.3	18.6									18.7	0000	346
u		8	3.875	8	13.6	16.4	871	18.3	18.8	10.	19.9	20.0	20.0	20.0	2.00	1			20.0	.0612	333
31		980	3.876	01	12.6	≘ ĕ	17.8	3	30	5.0 7.0									3€	1000	333
8	•	780	3.875	€.70	13.6	17.7	20.4	1.22	23.1	23.8	٠								24.0	.0294	752.
AVERAGE APPARENT STRESS	PARE	5							PATA .	N FINS	CONTINUED ON	N NEXT	PAGE								
STANDARD DEVIATION APPARENT STRESS	DEVIA	NO.																			
AVERAGE APPARENT STRESS - 30.	PARE	E S																			
*(.58) × (AVERAGE APPARENT STRESS)	ERAGE ERE)	VAV	RENT																		
*(.36) x (AVERAGE APPARENT STRESS - 3 #)	RAGE	¥4.	RENT				l L														
			1	1																	• •

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED
THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AII-29 REDUCED TEST DATA DATA CONTINUED FROM PREVIOUS PAGE

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PANEL NO. TY		ĺ																		
	TYPE TEST	ST	TE	TEST DIRECT	ECTION	Z	SFEC	COND	SPEC. CONDITIONING	ږو	TE	TEST COND	NO.		RESIN CONT	CONT	N	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N 7, S/N 10 PAN	PANEL SHEAR	EAR		6	0/80			NONE	NE		-66° F	-65°F FOR 30 MIN	N N		31.0%	ž				
NI/NI NIVELS	z		8	88	210.	910.	.020	.024	920	.032	88	8	ş	8	282	8	980	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	W(1)							STRESS	S.								31 11533	STRESS	7 <u>.</u> ≧
S/N 11 · 37	780	3.875	8.70	14.0	18.6	20.8	22.1	22.9	23.6	,								23.8	2820.	.337
13	88	3.875	08.2	13.4	16.4	17.8	18.7	18.1	19.3	19.4	19.5	19.7	19.9	20.0	20.0			20.1	.0628	329
*1	8	3.875	07.1	12.6	15.7	17.1	17.8	18.2	18.4	18.4	18.4	18.6	18.7	18.9	19.0	,		19.1	0990	.329
61	88	3.875	7.88	14.1	15.8	16.6	17.0	•										12.4	.0250	1361
							4													
AVERAGE APPARENT STRESS	EN		7.8	13.4	16.6	18.2	19.1											20.5	6383	
STANDARD DEVIATION APPARENT STRESS	ATION		8	22.	8	1.41	1.72											2.23	.01128	
AVERAGE APPARENT STRESS - 30	ENT		6.0	11.2	13.7	14.0	13.9											13.8	3900:	
*(.88) x (AVERAGE APPARENT STRESS)	E APPA	RENT	6.9	11.8	14.6	16.0	16.8											18.0		
*(.88) × (AVERAGE APARENT STRESS - 3¢)	E APPA	RENT	6.3	6'6	12.1	12.3	122											12.1		

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AII-30 REDUCED TEST DATA

PANEL NO.	TYPE TEST	TEST	F	TEST DIRECT		8	SPEC.	COND	SPEC. CONDITIONING	ç	1	TEST COND.	و		RESIN CONT.	ONT.	Ž	MINAL F	NOMINAL PER PLY THICKNESS	HICKNES
S/N 10	PAMEL SHEAR	HEAR	-	8				NONE			25° F.F.	26° F FOR 30 MIN.	Z.		31.0%					
STRAIN . IN JIN.	N 7 N		ğ	8	.012	9.	88	188	.028	Si Si	8	8	ğ	8	82	8	8	MAX	STRAIN	AREA
SPEC.	타	(L)A							STRESS - KG	5	1]		1		SI KESS	STRESS	
S/N 10 - 13	8	3.878	8	1a.	138	15.	<											17.7	<	372
25	8	3.875	98.9	12.0	14.0	16.3	<											16.9	<	*
υ a	980	3.876	5.70	12.9	162	17.6	<											19.1	<	328
23	8	3.875	98.9	12.9	16.3	<												19.1	∢	82,
R	280	3.875	88.4	10.4	11.9	12.6	13.1	13.5	<									16.5	⋖	986
	ļ	Ì				ļ														
	_																			
						_														
															<u> </u>					
AVERAGE APPARENT STRESS	ARENT		6.8	11.8	14.5	15.9														
STANDARD DEVIATION APPARENT STRESS	VIATIO	z																		
AVERAGE APPARENT STRESS - 30	ARENT		9.6	11.4	14.3	16.6												16.8		
*(.88) × (AVERAGE APPARENT STRESS)	AGE AP	PARENT	6.0	8.4	12.8	14.0												15.8		
*(.88) x (AVERAGE APPARENT STRESS - 3 0)	GE AP	ARENT	5.3	8.2	10.5	11.1												14.5		

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

. THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

PANEL NO.	TYPE TEST	EST	TE	ST DIR	TEST DIRECTION	2	SPEC.	COND	SPEC. CONDITIONING	S S	F	TEST COND	ġ	L	RESIN CONT.	ONT.	NON	NOMINAL PE	PER PLY TH	PLY THICKNESS
S/N 10 PA	PANEL SHEAR	IEAR		06/0			:					AT.			31.0%					
STRAIN IN	N./IN.		8.	900	210.	910	020	100	820	.032	8	8	ş	8	299	¥g.	090	MAX	STRAIN	AREA
SPEC. NO.	±(1)	(1)] -	STRESS - KS	5							<u> </u>		STRESS	ĭ <u>₹</u>
S/N 10 - 11	88	3.875	06.8	10.1	12.6	14.1	4											16.0	<	.372
15	88	3.875	06.2	10.4	12.8	14.0	4											15.6	4	.341
91	8.	3.875	g, o,	10.5	12.8	14.0	~											15.4	<	344
*	.	3.875	8.5	10.7	12.8	13.9	₹											15.7	< 1	.335
*	8	3.875	8	10.3	12.6	∢												15.5	4	.344
31	.097	3.875	6.5	10.0	13.0	14.6	<											15.6	∢	.376
8	86.	3.875	8.	10.6	12.9	<												15.6	<	366
01	8	3.875	9.90	11.1	13.7	15.4	<											17.1	<	386
17	8	3.875	8	10.6	12.7	<											_	15.2	<	.362
30	780	3.875	6.80	11.8	14.7	16.4	«											17.3	∢	.337
AVERAGE APPARENT STRESS	RENT		06.3	10.6	13.1	14.8										_		15.9		
STANDARD DEVIATION	MATION		Ŧ.	ĸú	63 :	11.11										-		22		
AVERAGE APPARENT STRESS : 30	RENT		4.0	9.1	11.5	11.5												13.8		
*(.88) × (AVERAGE APPARENT STRESS)	GE APP	ARENT	5.6	9.3	11.5	13.0												0.4		
*(.88) × (AVERAGE APPARENT STRESS - 3 Ø)	GE APP	RENT	3.5	8.0	10.1	10.1												12.1		

FOOTNOTES (1) TO NEAREST DOI"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE -AII-32 REDUCED TEST DATA

PANEL NO.	TYF	TYPE TEST	12	Ĭ,	TEST DIRECTI	ECTION	_	# EC.	8	SPEC. CONDITIONALG	ې	F	TEST COMO	9	<u> </u>	RESIN CONT.	20 F.	-	DMINAL P	NOMINAL PER PLY THICKNESS	HCKNESS
S/N 10, S/N 11	PANE	PANEL SHEAR	AR		3	08/0			80			1	2	MEN" F FOR 30 MEN.		31.0%					
STRAIN IN IN	7 / N			8	8	210.	910	8	201		220	1	3	I	1	2	8	8	MAX	STRAIN	AREA
SPEC. NO.		T(1)	(1) M] "										91 41 59	STRESS	N.
S/N 10 · 12		8	3.876	06.2	98.6	10.5	12.0	1.2.1	3	3	<								14.8	<	1
19	-	3	3.876	8,5	97.6	88	ğ	11.2	22	<									12.7	<	18
*		380	3.876	999	09.2	11.6	13.4												13.9	<	380
37		8	3.875	282	3.50	10.5	11.	77.	<										13.3	<	¥
6		8	3.875	98.8	3.80	10.	15 25												14.4	g	*
8		8	3.876	3	2	10.2	11.5	12.2											13.7	<	346
æ		8	3.876	8.40	08.5	11.0	12.6	ž	<		i								14.6	<	987
g	-	280	3.876	0.00	98.7	11.0	12.6	13.3	«										14.2	<	8
S/N 11 - 12		380	3.875	1.48	08.2	10.1	11.2	11.9	12.5	12.8	6724	12.8	3	1:0					13.1	.0432	328
18		38	3.876	06.6	06.5	68	1.0	11.3	11.4	11.6	11.8	12.0	123						12.4	2780.	328
AVERAGE APPARENT STRESS	PARE	Ę		8.1	4.8	10.5	12.0												13.7		
STANDAND DEVIATION	DEVIA	10M		Ħ	7	8	ৰ												2		
AVERAGE APPARENT STRESS - 30	PARE	F		1.	7.2	2	978							-					112		
*(JBS) × (AVERAGE APPARENT STRESS)	ERAGE ESS)	VAV	RENT	4.6	7.4	8.2	911												12.1		
*(.88) × (AVERAGE APPARENT STRESS - 3 ¢)	ESS . 3	V	RENT	3.6	5.3	7.6	4.8												6.6		
														1	1	1	1	1			

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

. THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AII-33 REDUCED TEST DATA

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PANEL NO T	TYPE TEST	ST	TE	TEST DIRECTI	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	اد	TE	TEST COND	Ö.		RESIN CONT	TNO	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 6 PAR	PANEL SHEAR	EAR		06/0			10° HR	100 HRS @ 400 ⁰ F	ا ت ت	-	400° F FOR 30 MIN	FOR 30	N.	Ľ.	31.0%			9800		
STRAIN IN /IN	Z		83	8	210.	910.	.020	.024	820	.032	8	8	ş	8	290	950	0.060	MAX	STRAIN	AREA
SPEC	1,1)	W(1)						S	STRESS	KSI	1							N HESS	STRESS	N. I≧
S/N 6 - 9	0,0	3.875	1.0	1.9	2.6	3.2	3.7	4.2	4.5	4.8	5.0	5.1						6.3]
11	880	3.875	1.2	2.1	2.7	3.3	3.8	4.2	4.5	4.8	5.1	5.3						6.5		
16	986	3.875	1.5	3.0	4.1	5.0	5.7	6.1	6.5	6.7	6.9	7.0						7.2		
					-															
																				
AVERAGE APPARENT STRESS	ENT		1.2	2.3	3.1	3.8	4.4	8.4	6.2	5.4	5.7	5.8						6.7		
STANDARD DEVIATION APPARENT STRESS	ATION			-																
AVERAGE APPARENT STRESS : 30	RENT		1.1	2.0	2.7	3.4	3.9	4.3	4.5	4.8	5.0	6.1						5.9		
*(.88) x (AVERAGE APPARENT STRESS)	E APPA	RENT										-								
*(.88) x (AVERAGE APPARENT	E APPA	RENT																		

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

IC) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

. THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AII-34 REDUCED TEST DATA

PANEL NO.	7	TYPE TEST		TEST	TEST DIRECTION	CTION		SPEC.	OND	SPEC. CONDITIONING	õ	=	TEST COND.	و ا		ESIN	RESIN CONT.	Ž	OMINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
SNB	PANE	PANEL SHEAR		8	98.0		-	8	100 HRS @ 250 ⁰ F	8 8		460° F	460° F FOR 30 MM.	3	ļ .	31.0%		-	8800		
STRAIN IN /IN.	N		Ì	8	8	210	910.	88	10.	920	220	8	8	\$	8	82	8	8	XAX.	STRAIN	AREA
SPEC. NO.	-	W (1)1	(L)A			1			*	STRESS . KSI	5	1							N HE	STRESS	Z.
S/N 6 - 15		926	3.878	1.1	2.0	2.7	3.2												3.4	0192	
	-	T	-	+ -	\vdash			1													
	<u> </u>				 			† -													
	-																				
	_	_																			
	-					1															
							 														
					-																
AVERAGE APPARANT STRESS	ARA	1																			
STANDARD DEVIATION APPARENT STRESS	EVIAT RESS	NOI																			
AVERAGE APPARENT STRESS - 30	AREN	Į.		1.0	1,8	2.4	2.8												3.0	2810.	
*(JB) x (AVERAGE APPARENT STRESS)	AGE S)	APPARE	EN:																		
*(.88) x (AVERAGE APPARENT STRESS - 3 d)	AGE S	APPARE	F																		

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

	ACTOR: 2.10	STRAIN GAGE RESISTANCE: 360	887-00-C ::		3AC 4 11 3 0		6380 LBS CUTOFF						6370 LBS CUTOFF								
	STRAIN GAGE FACTOR: 2.10	RAIN GAGE R	EATENSOMETER: 5-400-2AB		SOTOTOW	(18)													1		
ION TESTS	S	TS X	Š.	i	POISON'S	3	_	.1286	.1210	.1026	.0892	7870.	1	.1107	1128	.1036	.0940	.0864			
POISSONS RATIO FROM TENSION TESTS		<u>.</u>			STRAIN	(N/N)	_	.00280	00670	.00010	.01260	.01580	-	.00320	00900	01000	01230	.01500	İ		
NS RATIO F		FILA. ORIENT.	%		STRAIN	(IN./IN.)	-	.000364	068000	1000034	911100	022100	_	.000364	949000	.00CP44	.001156	.001200			
	-	+		-	STRESS	(KSI)	0	10	20	30	40	49.6	0	10	30	36	\$	48.9			
TABLE - AII-35		MESIN	31.0%		LOAD	(FBS:)	0	1087	2174	3261	4348	5380	0	1100	2200	3300	4400	6376			
TAB		AMEL	S/N10		AREA	(SQ. IN.)	.1087						.1100								
l	12.30	-			THICK	(IN.)	780.						.088								
					WIDTH	(IN.)	1.249						1.249								
	DATE: 11-15-68 MATERIAL IDENTIFICATION:	יאר וספאווי			TEST		RT						RT								
	DATE:				0 TEC		S/N10 - 28						S/N10 - 26								

	ACTOR:2.10 IEBIBTANCE: 360	R: S-400-2AB	REMARKS	4390 LBS CUTCFF	([]9.										
	STRAIN GAGE FACTOR:2.10 STRAIN GAGE RESISTANCE:	EXTENBOMETER: S-400-2AB	MODULUS Ex 10 (PSI)												
ION TESTS	a a	a	POSSON'S RATIO	-	1222	.1276	2221.	.1106	0000	0000					
POISSONS RATIO FROM TENSION TESTS	Ė	1	STRAIN LONG. (IN./IN.)	-	.00200	.00620	33900	00110	.01430	.01440					
NS RATIO F	FILA. ORIENT.	8 .	STRAIN TRANS. (IN./IN.)	l	815000.	.00064	87,9000.	.001218	.001412	.001424					
			STRESS (KSI)	0	10	20	30	0#	50	50.5					
ABLE - AII-36	RESIN CONT.	31.0%	LOAD (LBE.)	6	26	1700	2660	3400	4260	4296					
TAB	PANEL	S/N7	AREA (SO. IN.)	0980											
1	-	3	THICK (IN.)	890											
	DATE: 11-15-08 MATERIAL IDENTIFICATION:		MIDTH (IN.)	1.240											
	DATE: 11-15-08 MATERIAL IDENTI		TEST COMO.	F					l						
	DATE:		PPEC IDEN.	S/N 7 - 23 (4A)											

	ACTOR: 2.10	STRAIN GAGE RESISTANCE: 350	I: SS-400-2AB		300		4820 LBS CUTOFF						4860 LBS CUTOFF								
	STRAIN GAGE FACTOR: 2.10	RAIN GAGE A	EXTENSOMETER: SS-400-2AB		MODULUS	(FSI)											! !				
ION TESTS	l ਗ	5 1	מ		POISONS	E E	-	9660	.1005	.0884	7970.	0240	1	.1170	.1160	, 8	_L. ≒ _L.				
POISSONS RATIO FROM TENSION TESTS	<u>.</u>	<u>.</u>			STRAIN	(IN./IN.)	1	.00336	09900	.01030	.01406	.01500	•	.00336	.009610	C#010.	10.	.0.			
NS RATIO	4 H	FILA. ORIENI.	906		STRAIN	(IN./IN.)	í	.000334	199000	016000	870100.	.001094	_	.000382	.000764	0001000	021100	061100			
		+	×	- -	STRESS	(KSI)	0	10	02	00	0#	42.2	0	10	20	90	01	42.2	•		
TABLE - AII-37	1000	NESIN	31.0%		LOAD	(LBS.)	0	910	1820	2730	3640	3840	0	488	1874	2811	3748	3960			
TAB		AMEL	S/N7		AREA	(\$Q. IN.)	0160.						.0837								
			v		THICK	(IN.)	.073						.075								
	ECATION:				МОТН	(IN.)	1.247						1.250								
	DATE: 11-14-68 MATERIAL IDENTIFICATION				TEST		RT						RT								
	DATE:				S EC		S/N7 - 21						S/N7 - 22 (4A)								

	STRAIN GAGE FACTOR: 2.10 STRAIN GAGE RESISTANCE: 360	1: 6-400-2AB	REMARKS		4750 LBS CUTOFF						4900 LBS CUTOFF							
	STRAIN GAGE FACTOR: 2.10 STRAIN GAGE RESISTANCE:	EXTENSIONETER: 5-400-ZAB	MODULUS E x 10 (PSI)											-4				
N TESTS	.	ā	POISON'S GATIO			1321	1021.	.0826	.0893	.0673	1	.0968	.0963	7080.	10794	.0732		
POISSONS RATIO FROM TENSION TESTS	E		STRAIN LONG. (IN JIN.)	1-0	1	.00280	00830	.01020	.01460	.01490		.00330	.00840	08800	.01380	01510.		
RATIO FR	FILA. ORIENT.	98	STRAIN TRAME. (IN./IN.)		1	.000370	119000	.000842	A00100.	.001016		.000316	019000.	069000	080100	4 01100.		
POISSONS		*	STRESS (KSI)		0	10	20	30	0+	42.7	0	10	20	90	0+	44.0		
TABLE - AII-38	RESIN CONT.	31.0%	LOAD (LBE.)		0	1112	2224	3336	4448	4590	0	1115	2230	3346	4460	4800		
TABLE	PANEL	S/N10	AREA (SQ. IN.)		1112						.1115							
1		v	THICK (IN.)		980						680							
	DATE: 11-14-88 MATERIAL IDENTIFICATION:		MDTH (IN.)		1.251						1.252							
	11-14-68 AL IDENTII		TEST COND.		RT						RT							
	DATE: 11-14-88 MATERIAL IDEN		SPEC IDEN		S/N10 - 36						S/N10 - 36							

TABLE - AIII-1 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	-	TEST DIRECT	RECTION	z	SPEC		CONDITIONING	ıg	1	TEST COND	و		RESIN CONT	ONT	2	NOMINAL P	PER PLY TH	THICKNESS
S/N 14	TENSION	₹.		စ			-86°F F	86°F FOR 1 HR	<u> </u>		98°A	66°F FOR 30 MINS	SMINS	-	35.6%	*		9	0106	
STRAIN IN./IN.	1./IN.		.002	8	8	8	010	210.	410.	910.	810.	.020	220	.024	920	920	030	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	W(1)							STRESS	iSi						•		2	STRESS	ž.
147	98 0	8	4.8	10.5	16.3	21.9	27.0	31.6	36.8	41.6	47.0	50.5	98.0	25.53 2.7.	67.1	75.5	90.5	84.0	0800	1140.
148	28 0.	7867	06.5	11.6	17.0 ,	22.8	27.8	7.22	37.0	42.1	46.7	51.1	66.7	0.09	61.8	69. 0 72.5	75.4	76.8	.0332	£140.
2 P	8 .	.	98.5	16.0	20.1	26.4	30.3	36.8	41.1	47.0	62.0	67.5	62.5	67.7	73.0	78.9	8 5.3	87.5	0250	E140.
151	.083	8	0.80	15.6	19.5	24.3	30.2	36.5	41.3	1.9	6.13	1.79	62.0	67.0	72.5	77.0	91.0	85.0	914	1190
153	98.	ş	07.8	15.0	19.5	24.2	29.6	36.0	40.3	46.5	50.5	56.2	90.0	66.0	7.08	74.3	82.5	84.3	9220	.0420
156	86	\$	98 0.0	15.4	19.7	24.7	29.4	34.9	40.1	46.4	50.2	56.2	60.0	0.90	7.00	74.3	82.9	1.38	9220	.0421
156	8	.497	7.29	15.4	19.5	24.2	29.8	34.8	40.0	46.4	50.4	55.9	9.09	9.99	70.5	75.4	83.7	98.0	6220	7190
158	9. 88	\$	2.	15.4	19.2	24.6	29.5	34.4	39.2	44.6	40.6	54.7	59.4	2.3	0.69	73.5	81.6	82.8	1220	1240.
161	980	8	8.8	18.4	20.2	25.0	30.4	38.4	40.4	45.9	50.8	5.99	60.4	66.4	70.4	79.5	83.0	83.0	(3)	.0421
162	.087	£83	08.3	15.4	19.6	24.4	29.3	36.2	1.04	6.4	50.5	56.5	60.2	0.99	7.00	74.1	81.7	84.5	0000	.0424
AVERAGE STRESS	ESS		7.6	15.7	19.1	24.2	29.4	34.5	30.6	94.9	40.9	8.4.8	5.6.6	4.	9.00	73.9	78.3	623	0000	
STANDARD DEVIATION STRESS	RESS		1.28	2.24	1.31	1.06	1.10	1.34	1.55	1.72	1.78	2.29	2.46	2.78	3.87	3.48	3.78	2.86	28100.	
AVERAGE STRESS-30			4.8	8.0	16.2	21.0	26.1	30.5	98.0	.30.7	44.7	67.9	52.2	1.09	0.89	63.6	67.1	75.3	0275	

(A) COMPRESSONETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

* SPLIT BOXES READ FROM UPPER LEFT TO LOWER RIGHT, TO NEXT BOX, IN .002 INCREMENTS OF STRAIN STARTING WHERE BOXES BEGIN TO BE SPLIT.

TABLE - AIII-2 REDUCED TEST DATA

PANEL NO. T	TYPE TEST	ST	الق	TEST DIRECT	ECTION		SPEC.		CONDITIONING	4G		TEST COND	Š	<u> </u>	RESIN CONT	NO	Ž	NOMINAL P	PER PLY TH	PLY THICKNESS
S/N 16	TENSION	Z		308	J		460F	66°F FOR 1	E		98°	SE FOR 3	30 MINS		35.6%	×		O,	.0101	
STRAIN - IN./IN.	/N.		700	8	900	900	010.	210.	.014	910.	810.	020	220	1024	920	.028	030	MAX	STRAIN	AREA
SPEC. NO	τ(1)	W(1)							STRESS	<u>5</u>									STRESS	7. 7.
52	.080	804	8.80	15.1	18.9	23.9	28.4	33.2	37.9	42.8	47.5	52.0	8.6	61.0	4.9	70.3		72.5	1620	0398
82	.080	7897	08.8	15.3	18.9	23.9	28.4	8728	37.7	42.8	42.E	62.0	56.8	61.5	8.39	70.2	·	71.5	7820.	9960
x.	.080	700-	08.3	14.6	18.3	23.1	28.2	22.7	37.4	42.0	46.7	5.13	56.0	4.08	8.48	80.0		70.5	.0296	9960
82	080	764.	8.80	15.0	18.3	23.6	28.7	33.2	37.7	42.7	47.8	52.5	56.8	81.5	62.9	70.4	73.9	71.6	.0302	9000
8	08 0:	3	37.8	14.6	18.3	22.8	27.6	32.6	37.7	42.1	46.7	51.5	66.0	0.00	64.0	68.3		88.4	.0283	98600
31	580	.407	08.2	14.5	18.2	23.0	27.8	32.2	36.8	41.6	46.0	50.5	64.8	5.62				62.8	9920:	.0413
æ	.080	88	9.80	15.0	18.6	23.2	27.6	32.2	37.4	42.2	8.8	51.3	6.99	4.0	6.19	2.	ī	73.6	9620	9600
18	.083	.407	27.0	14.0	17.4	21.8	26.4	30.8	35.8	40.7	45.0	40.5	54.3	58.0	62.6	,		1.8	.0260	.0413
8	<u>8</u> .	.407	07.9	14.7	18.2	22.6	26.8	31.8	36.4	41.3	46.8	50.1	54.5	69.0	•			61.5	8\$70°.	7040
Ŧ	290.	8	08.5	14.2	19.2	23.2	27.8	32.2	36.9	41.3	46.0	50.6	55.0	5.62	63.E			4.8	.0279	.040
AVERAGE STRESS	×	1	8.3	14.8	18.5	23.1	8.72	₹7.00	37.2	62.0	9.04	51.2	66.7	1.00				68.7	.0280	
STANDARD DEVIATION STRESS	ESS		2 8:	.37	19.	2	8	22:	8	22.	88	8	ă,	1.13				4.19	77100.	
AVERAGE STRESS-30			6.5	13.7	17.0	21.2	26.8	3.02	36.2	39.8	43.7	48.4	62.9	58.7				1.99	9220	

TABLE - AIII-3 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	F	TEST DIRECT	RECTION	z	SPEC	COND	SPEC. CONDITIONING	NG	1	TEST COND	ND.		RESIN CONT.	CONT.	ž	NOMINAL PI	PER PLY TH	PLY THICKNESS
S/N 14	TENSION	NO O		0	00	<u>~</u>	6% RH	• 125°	F FOR 4	96% RH @ 125°F FOR 42 DAYS		-86°F FOR 3	30 MINS		36.6%			9010	8	
NI/NI NIARTZ	IN./IN.		005	8	900:	80	010	.012	10.	910.	810.	020	220	.024	920	820	030	MAX	STRAIN	AREA
SPEC NO.	(1)1	W(1)							STRESS - KSI	S . KS									STRESS	Z Z
Q	98	8	7.70	14.7	21.6	25.8	30.8	38.1	41.0	46.9	51.6	5.99	61.4	1.99	,			68.4	.0252	.0416
ø	980	492	07.9	15.4	21.8 ,	26.6	30.8	38.2	41.4	46.1	51.6	55.4	61.4	0.99	70.4	74.0		74.3	.0284	.0423
3	980	498	08.3	15.4	22.0	28.1	31.2	8,	42.1	47.1	52.0	57.3	62.0	98.5				0.08	.0262	.0422
\$	18 6.	484	07.9	15.7	22.4	28.3	31.3	38.4	42.1	47.5	53.0	57.8	62.4	67.0	70.0			70.5	.0264	.0415
\$	38 .	.467	07.2	15.1	21.6	26.7	30.6	36.6	42.0	47.0	52.3	57.4	67.4	67.1	71.8	74.6		75.0	.0292	.0417
51	990:	4	08.3	15.5	21.9	28.0	908	7.98	41.0	46.5	9.13	5.83	61.4	0.0	70.3	73.6	•	74.3	0620	.0420
23	.082		9.80	16.7	23.3	27.4	90	9.8	4,	50.0	9.99	90.6	6.5	71.0	76.6	1		76.4	.0264	.040
8	280.	104	080	16.7	2.2	28.6	31.4	37.3	42.8	48.5	53.5	38	3	98.0	72.5	74.5	•	76.4	0280	.0413
19	190.	9	08.3	16.8	23.0	82	32.8	38.3	43.7	49.0	3.5	56. 5	4.4	4.8	8.17	73.8	•	74.3	0670	.0412
8	980	8	97.9	16.2	21.5	25.6	8	87.7	8 0	46.2	51.4	56.2	61.0	98	70.0			72.0	.0314	.0429
AVERAGE STRESS	TRESS		0.90	15.6	22.1	28.2	31.3	8	42.1	47.5	52.7	67.6	62.6	67.2				73.0	9720.	
STANDARD DEVIATION STRESS	STRESS		30	8	.	8	8	1.83	1.26	1.29	1.40	1.61	1.54	1.50		-		2.89	62000	
AVERAGE STRESS-30			6.8	13.6	20.3	24.1	28.6	33.6	38.3	43.6	48.5	62.8	66.0	83.4				64.3	0120	

TABLE - AIII-4 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	<u> </u>	TEST DI LECT	RECTION	2	SPEC	SPEC. CONDITIONING	TION	ဋ	"	TEST COND	Š		RESIN CONT	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N 14	TENSION	NC		8		ā	S% RH	126°F	FOR 4	96% RH @ 126°F FOR 42 DAYS		FOR	-86°F FOR 30 MINS	10	36.6%			O.	20.0	
STRAIN IN./IN.	K./IN.		200	8	98	8	010	210.	10.	910.	810.	020	.022	.024	920	820.	020	MAX	STRAIN	AREA
SPEC.	τ(1)	w ⁽¹⁾] _	STAESS	5									STRESS	Z
102	.083	.406	07.3	14.6	19.7	23.8	28.6	33.2	38.1	43.0	1.8	62.3	56.6	60.7				63.1	.0258	2140.
104	.082	.407	07.6	14.7	19.6	24.4	28.0	12	38.7	43.3	48.0	62.7	17.2	61.3	0.0			66.7	.0282	9040
100	.082	.466	08.1	15.4	19.8	24.4	28.2	34.2	39.0	0.4	48.7	53.1	67.9	61.3				64.6	.0256	0.
01.1	8	488	08.2	15.6	20.3	24.8	7.82	34.4	8.4	£.3	0.0	63.5	0.88	62.0	٠			1.88	.0260	940
146	780.	.406	08.0	12.0	18.0	23.8	28.9	33.2	38.0	42.0	46.9	7.08	56.4	98				60.9	.0256	9140.
146	.083	. 40 3	8.70	15.4	20.0	24.5	29.4	34.0	39.2	44.0	48.7	62.9	57.5	61.2	C. e.	,		64.8	.0268	9040
S	8	.40%	08.0	15.2	20.5	24.4	29.0	33.8	38.7	43.5	1.84	52.0	8.68	60.4	64.0		ž į	64.8	.0268	4140.
8	8		07.2	14.5	19.3	23.6	28.2	32.3	37.4	42.2	46.8	51.0	56.5	4.08	11			61.6	.0258	3140.
76	9.	.403	07.3	14.5	19.3	23.4	27.8	32.6	37.0	41.8	46.2	8.03	56.0	58.8				61.6	.0260	.0414
π	8.	466	7.98	15.9	8.4	24.9	29.9	34.8	39.4	7'77	46.1	54.1	58.5	62.8	66.3			9.99	.0263	1040.
AVERAGE STRESS	ESS		7.5	14.9	19.7	24.2	28.9	33.7	38.5	43.2	48.0	52.3	56.8	60.7				63.9	.0261	
STANDARD DEVIATION STHESS	HESS		.75	1.10	.73	19:	8	17.	2	78.	88,	1.10	1.20	1.31				1.61	34000.	
AVERAGE STRESS-3G			6.3	11.6	17.5	22.7	58.	31.6	38.0	47.3	46.0	0.0	53.2	8.				59.1	.0247	
											1	1	1		1	1	1		1	1

TABLE - AIII-5 REDUCED TEST DATA

PANEL NO	TYPE TEST	rest	1	EST DI	TEST DIRECTION	Z	SPEC.	SPEC. CONDITIONING	TIONIA	٩٥	7	TEST COND	9	e	RESIN CONT	ONT.	Ŏ.	AINAL PI	NOMINAL PER PLY THICKNESS	HICKNES
S/N 14	TENSION	NO		ō	00	_ 88.	* RH	86% RH ● 125 ⁰ F FOR 42 DAYS	FOR 42	DAYS	1	25°F FOR 30 MIN	Z		35.6%		-		0010.	
STRAIN INJIN	N./IN.		005	8	8	8	010.	.012	A10 .	910.	810.	020	.022	.024	920	028	030	MAX	STRAIN	AREA
SPEC NO.	(1)1	W(1)	_						STRESS · KSI								<u></u>		STRESS	N.
2	.083	8	08.0	15.7	22.0	27.3	32.2	37.1	42.5	47.8	53.0	58.5	62.9	64.2	,			65.0	.0243	4140.
88	180	496	07.8	15.0	21.0	, 25.8	31.0	36.0	41.0	46.3	51.1	56.0	60.5	61.4				62.4	.0250	7140.
88	280 :	864	07.5	13.6	19.8	26.0	31.8	37.8	43.8	40.4	5.5	5.62	62.4					62.9	.0238	ب
8	890.	8	10.4	19.2	26.0	31.8	38.2	44.5	61.0	67.7	64 .3							70.5	0200	8000
11	8	8	07.7	14.9	21.7	28.6	31.6	36.6	41.6	47.0	52.4	56.5	60.5	61.3				61.3	(I) .0267	.0420
																-				
						1														
										11										
AVERACE STRESS	1ESS		8.3	15.7	22.1	27.3	33.0	38.4	4.0	8.64	1.98							4.8	.0238	
STANDARD DEVIATION STRESS	TRESS														-					
AVERAGE STRESS-30																				

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE UCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AIII-8 REDUCED TEST DATA

PLY THICKNESS		AREA	¥. ≥	9130	4140.	9.00	.040	98						,.
ER PLY TI	.010 4	STRAIN	STRESS	.0226	.0210	.0208	9020	.0224				31.20		
NOMINAL PER	ģ	MAX	200	0.99	61.5	52.0	53.6	56.3				53.7		
Ž		060												
CONT.	و ا	920												
RESIN CONT	36.9%	920												
•		.024	1											
NO.	N	220		56.7		,		25 87						
TEST COND	25°F FOR 30 MIN	020		61.6	0.08	50.5	61.9	61.0				61.0		
L	26.6	810.		47.1	0.8	9.9	47.7	47.0				3		
91	DAYS	910.	3	42.5	42.0	42.0	43.0	43.0				42.6		
TIONIP	OR 42	10 .	STRESS - KS	38.0	37.5	37.8	38.6	38.3				2 2		
SPEC. CONDITIONING	125°F FOR 42 DAYS	210.	•	33.2	32.6	33.0	33.4	33.3				1.82		
SPEC.	PSK RH	010.		28.8	27.8	28.6	28.0	23.4				28.6		
	8	800		23.8	23.2	24.0	24.1	23.7				22.8		
CTION		8		19.2	18.7 ,	19.5	19.7	19.8				19.4		
TEST DIRECTION	906	ğ		14.2	13.8	14.7	14.8	14.8				14.5		
TES		200		07.2	07.3	6.70	07.4	4.70				7.4		-
15			(L) M	8	.403	909	984	194						
TYPE TEST	TENSION	z	(1)1	28	190	780	280	280			1	40	22	
		STRAIN IN./IN.	U									AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-9 O
PANEL NO	S/N 14	ST	SPEC	25	16	3	106	143				AVER	STANI	AVER

TABLE - AIII-7 REDUCED TEST DATA

TEST DIRECTION	TEST DIRECTION
0° 95% RH @ 125°F	
21 004 006 008 010 012	000 000 010
	, M(1)
5.5 12.9 19.7 25.0 30.2	19.7 25.0
5.7 13.6 19.9 25.0 29.9	19.9 . 25.0 29
7.1 14.2 20.2 25.4 30.	20.2 25.4
7.6 14.4 20.8 25.8 30.7	20.8 25.8
3.2 15.9 23.0 28.8 34.	23.0 28.8
7.2 14.3 20.4 25.8 31.1	20.4 25.8
14.9 21.4 26.8 32.2	21.4 26.8
7.2 14.2 20.4 25.4 30.7	20.4 25.4
7.4 14.2 20.0 25.6 31	20.0 25.6
7.3 14.6 20.6 26.2 31	20.6 26.2
.3 14.3 20.6 26.0 31	20.6 26.0
0 .76 1.04 1.13 1.22	1.04 1.13
5.3 12.0 17.2 22.6 7.5	7.2 22.

FOOTNOTES (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-8 REDUCED TEST DAYA

PANEL NO.	TYPE TEST	EST	TE	TEST DIRECT	ECTION	_	SPEC.	CONDITIONING	TIONIN	U	I	TEST COND	g	, a	RESIN CONT	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 14	TENSION	Z		.08		_ 8.	96% RH •	125°F	126 ⁰ F FOR 42 DAYS	DAYS		RT			36.9%				9010	
STRAIN IN/IN	JN.		200	ğ	900	88	010.	210.	4.0.	910.	8 8 8	80	022	624	920	920	020	MAX	STRAIN	AREA
SPEC.	1(1)	W ⁽¹⁾						*	STRESS . KSI	. KG								200	STRESS	Z.
æ	180	.403	4.80	13.1	18.4	23.1	27.6	32.6	37.2	41.8	46.0							48.5	2610.	114 0.
S	980	8	9.90	12.8	18.0	22.2	26.8	31.3	36.8	39.8								43.9	.0184	.0422
8	<u>8</u>	88	07.1	13.6	19.2	23.5	28.2	32.8	37.4	41.7	46.0	,						40.4	.0198	.0417
8	96	.46 5	06.5	12.5	18.3	22.7	27.4	32.1	38.7	41.1	46.5				-			4.04	(E) 6810.	.0416
101	.082	984	06.9	13.5	19.1	23.6	28.4	33.2	38.0	42.5	47.0							50.2	.0197	0407
107	.082	.497	07.4	14.2	19.4	24.0	29.0	33.7	38.6	43.1	47.4							50.8	.0195	0408
112	8	.495	9.90	12.9	19.0	24.3	28.2	34.0	38.8	43.4	47.9	52.0	,			1		52.0	.0204	.0401
119	8	\$	07.1	13.8	19.0	23.2	27.8	32.6	37.1	41.4	46.5	49.4	•					50.0	020	.0422
141	8	.486	96.4	12.8	18.4	22.8	27.4	32.1	36.8	41.1	-							44.8	7710.	.0422
144	8	.497	6.90	13.4	18.7	22.7	27.8	32.6	37.0	41.1	16.5							49.3	.0199	.0418
AVERAGE STRESS	B		06.8	13.2	18.8	23.2	8.75	32.7	37.3	41.7								48.9	.0196	
S.ANDARD -EVIATION STRESS	ESS		.32	.43	94.	.66	.74	8	6	16.								2.67	98000	
AVERAGE STRESS-3 O			5.8	11.9	17.4	21.3	25.7	30.3	34.6	39.0								40.9	.0169	

TABLE - AII!-9 REDUCED TEST DATA

TYPE	TYPE TEST	_	TES	T DIR	TEST DIRECTION		SPEC.	SPEC. CONDITIONING	TIONII	NG NG	F	TEST COND	ND.	-	RESIN CONT	CONT	Q V	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
Ž	TENSION		_	00				NONE	.,,		160 ⁰ F	160°F FOR 30 MIN	NIMC		35.6%			O.	.0104	
STRAIN - IN./IN.			200	ş	900	800	.010	.012	.014	910.	810.	020	220.	.024	920	.028	030	MAX	STRAIN	AREA
<u>`</u> -	τ(1)	(1) M							STRESS	. KSI								21 4633	STRESS	7. ¥
5	283	4	7.90	12.6	18.3	23.4	28.3	33.0	37.6	42.0	46.7	51.2	55.5	5.62				61.2	.0260	, 5130
2	980	497	06.5	12.4	17.7 ,	21.9	28.4	30.8	35.1	39.6	44.4	48.5	52.4	3 5	,			58.6	.0256	.0423
ō.	980	764	6.39	12.1	17.3	21.5	25.8	30.3	34.9	40.0	43.8	47.9	52.3	96.0	59.1	,		59.9	.0266	.0423
8	889.	.497	6.5	12.3	17.7	21.4	26.6	31.1	35.6	40.7	44.4	48.5	52.7	56.8				60.3	.0259	.0423
8	088	487	6.90	13.4	18.9	23.6	28.6	33.3	1.88	43.1	47.7	52.3	56.5	61.0	64.5			66.5	.0268	9860.
<u>s</u> ,	280	964	07.3	13.9	18.9	24.0	28.8	33.6	38.3	43.0	47.8	52.1	56.5	9.09				63.2	.0260	.040
8	280	8	06.2	12.6	7.71	22.3	26.8	31.2	35.6	40.1	6.4	49.0	53.4	57.2				60.2	.0249	2140.
8.	.084	964	0.90	12.0	17.5	22.0	28.4	30.2	35.8	986	43.7	48.2	52.7	56.6	60.2			61.6	.0267	7140.
180		497	9.90	12.5	18.1	22.7	27.3	31.7	36.6	41.4	45.9	50.5	54.6	59.0	62.7			4.49	6m20.	.0403
280		497	08.5	12.7	18.2	22.5	27.2	31.6	36.3	41.2	46.4	ა.09	54.4	58.0	42.4			63.7	0720.	.0413
AVERAGE STRESS			6.5	12.6	18.0	22.5	77.2	31.7	36.4	41.0	46.4	8.9	53.9	1.89				61.9	.3261	
STANDARD DEVIATION STRESS			Ę	28	.56	8	.97	1.08	1.17	1.30	1.48	1.57	1.86	1.9				2.24	67,000.	
			5.3	10.9	16.3	19.8	24.3	28.5	6725	37.3	41.0	46.1	68.9	52.7	 			55.2	22	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER.
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-10 REDUCED TEST DATA

PANEL NO.	TYP	TYPE TEST		TES	T DIR	TEST DIRECTION	<u> </u>	SPEC.	COND	SPEC. CONDITIONING	٥	1	TEST COND.	Ģ	Ļ	RESIN CONT.	CONT.	Ž	NOMINAL P	PER PLY TH	PLY THICKNESS
S/N 16	TEN	TENSION			90				NONE			160°F	160°F FOR 30 MIN	Z		36.6%	% %	-	8	6900	
STRAIN IN JIN.	IN./IN.			200	906	86	88	010	210.	.014	910.	810.	020	.022	024	920	920	020	MAX	STRAIN	AREA
SPEC. NO.	-	T(1)	W(1)							STRESS - KSI	KS					1				STRESS	ž.
2	J.	86	96	07.5	13.4	18.7	12.7	27.4	32.2	36.8	41.5	47.1	50.4						51.0	.0203	.0307
•	٠	88	364	9.90	12.6	17.7 '	22.7	26.5	31.6	36.4	40.7	45.2	49.3						52.5	.0213	9860
9	O,	.073	69	4.:0	13.6	18.7	23.3	28.0	33.2	37.8	42.5	47.2	51.2						54.3	.0214	.0386
80	9	8	2	07.3	13.8	18.7	23.2	73.0	33.1	37.6	42.1	46.5							50.0	.0196	9800
01	9	.078	8	27.3	13.9	18.5	23.3	28.0	33.2	37.8	42.7	47.2	51.5	,					55.6	.0218	9860
21	9	. 770	86	6.7	12.0	16.7	21.:	25.6	30.0	34.4	38.8	43.2	47.2	51.0					54.1	.0236	.0384
23	9	88	8	8.90	11.6	16.2	20.2	24.5	28.8	33.1	37.4	41.5	46.5	49.4	53.0				53.5	.0243	9620
23	9	570.	98.	8	11.2	15.8	20.2	24.4	9.82	32.9	37.2	41.3	,						44.9	æ10.	.0362
*	o.	920	88	3	12.1	17.2	30.8	24.8	29.2	33.6	37.6	41.6	46.5						48.7	.0215	16 8
æ	9	08 80	884	8.90	11.6	16.8	20.5	246	29.0	33.0	37.3	41.3	46.0	40.1	52.5	•			54.2	.0248	6369
AVERAGE STRESS	TRESS			6.5	12.6	17.5	21.8	28.2	30.9	36.3	39.8	44.2							51.9	.0218	
STANDARD DEVIATION STRESS	STRESS			82	1.02	1.31	1.32	1.56	1.96	2.13	2.34	2.66							3.25	98100	
AVERAGE STRESS-3 J				4.3	9.8	14.2	17.8	21.5	25.0	28.9	32.8	36.2			·				42.1	.0162	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-11 REDUCED TEST DATA

PANEL NO. T	TYPE TEST	151	TE	TEST DIRECT	ECTION	_	SPEC	CONDI	CONDITIONING	٥	1	TEST COND	Ö	_	RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 14	TENSION	Z		00		86	* RH @	125 ⁰ F	FOR 4	95% RH @ 125 ⁰ F FOR 42 DAYS		160°F FOR 10: .N	Z. 	-	35.6%	*	 		0106	
STRAIN INJIN	Z		200	400	900:	800	010	.012	014	910.	018	020	022	.024	920	820	030	MAX	STRAIN	AREA
SPEC	T(1)	w ⁽¹⁾						S	STRESS . KSI	. KSI					1			SI KESN	STRESS	I <u>s</u>
-	8	.497	4.90	12.7	18.7	24.4	29.8	35.0	39.8						-			.1.3	.0146	.0423
е	25	8 8	06.7	12.9	19.1 ,	24.8	30.1	35.4	40.1	44.7							11	46.0	.0165	9119
ZC	.083	8	07.0	13.6	19.8	25.5	31.0	36.4	41.2									43.8	910.	.0412
7	88	498	96.5	12.5	18.0	23.6	28.8	33.8	38.3									42.0	9510.	1480
6	.083	496	1.70	13.6	19.9	25.9	31.1	36.4	41.4	46.3								48.5	9910	.0412
15	.082	496	07.1	13.5	19.8	25.8	31.4	36.5	41.6	46.1	,							47.0	.0163	7040.
17	8	96	07.2	13.4	19.4	26.3	30.8	38.0	40.7	45.4	,							45.8	1910.	7140.
19	8	98	7.90	13.1	19.0	24.8	30.2	36.5	40.3	46.1	,							45.9	£9;0	7180.
21	8 8	.493	9.90	13.1	19.0	24.6	30.2	36.5	40.4									44.9	0910.	A140.
23	883	492	9.90	13.0	19.1	25.2	30.7	38.1	41.1	,								45.3	.0159	9040.
AVERAGE STRESS	8		7.90	13.1	19.2	25.0	30.4	38.7	40.5									46.0	.0159	
STANDARD DEVIATION STRESS	ESS		99	28	.76	.70	11.	181	78.									1.86	68000	
AVERAGE STRESS-30			5.8	1.25	1.69	22.9	28.1	33.3	37.6						-			39.4	0138	

TABLE - AIII-12 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	1	ST DIR	TEST DIRECTION	-	SPEC.	CONDI	SPEC. CONDITIONING	٥	16	TEST COND.	9	_	RESIN CONT.	ONT.	ž	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N 14	TENSION	N		90 ₀		_8_	% BIL	126°F	96% RH & 126 ⁰ F FOR 42 DAYS	DAYS	1	FOR	100°F FOR 10 MINS		36.6%	*	-	9	.010 4	
STRAIN - IN./IN.	N./IN.		.002	100	900:	800	010	210.	4.0.	910.	810.	020.	220	95	920	820	89	MAX	STRAIN	AREA
SPEC. NO.	T(1)	W(1)						8	STRESS - KSI	2					1			31 HESS	STRESS	N .
æ	2862	984.	08.5	12.5	17.9	8.22	27.8	32.0	8								VS	38.2	.0152	.0407
8	28	964.	08.0	11.6	17.0	21.8	26.4	30.8	18									36.6	1410.	7140.
103	289.	984.	96.9	11.8	17.4	22.4	27.0	31.4	38.9							-		37.8	61.0.	7040.
106	96 28	8	08.5	12.6	17.9	22.7	27.2	31.9	38.0									37.9	.0140	1180
111	86.	8	06.6	12.6	18.0	22.8	27.4	32.0	38.4	,								38.7	.0150	.0412
124	98.	8	06.1	11.9	17.1	23.0	26.6	30.8	36.1	,								36.6	.0147	270.
137	.082	8	06.4	12.4	17.9	23.9	27.4	32.0	36.4									36.8	.0142	.0407
138	.082	495	06.8	12.1	17.2	22.8	26.1	30. ;	34.6									37.6	.0156	2250
139	480.	497	6.90	12.6	17.7	23.6	26.8	31.4	36.7									38.3	3910.	8140.
146	8	.493	06.8	12.6	17.9	23.7	17.12	31.2	36.8									38.6	.0156	41.80
AVERAGE STRESS	ESS		6.4	12.3	17.6	23.0	27.0	31.4	36.5									37.6	3210.	
STANDARD DEVIATION STRESS	RESS		.38	86	8	3 9.	19.	69"	6		_							8,	7,400	
AVERAGE STRESS-30			5.3	11.2	16.4	21.1	26.5	29.6	33.6									34.6	.0136	

TABLE - AIII-13 REDUCED TEST DATA

IICKNESS		AREA	Z.	.0422	1460	9425	.0431	51 50						
NOMINAL PER PLY THICKNESS	.0102	STRAIN	STRESS	.0146	.0137	.0157	.0132	.0139				.0142		
OMINAL P	O,	MAX		39.8	47.7	41.3	36.1	39.4				40.9		
		.030												
RESIN CONT.	×	820												
RESIN	%9E	.026												
-		.024												
NO.	O MIN	.022												
TEST COND.	220 ⁰ F FOR 10 MIN	020												
٦	22001	810.												
٥	DAYS	910	KSi	,										
COMDITIONING	95% RH@ 125 ⁰ F FOR 42 DAYS	410.	STRESS - KSI	38.6		38.8								
COMDI	125°F	210.	S .	34.3	42.9	34.4	33.3	34.8		-		36.9		
SPEC.	ж вне	010		29.0	37.4	29.4	28.3	29.4				 30.7		
	36	800		23.8	30.6	24.2	23.0	24.2				25.1		
TEST DIRECTION		900		18.3	23.2 ′	18.2	17.9	18.5	1			19.2		
T DIR	%	8		12.4	16.4	12.6	12.1	12.6				13.2		
TE		.002	-	06.5	1.80	9.90	₹.98	6.90				6.9		
ST	z		W ⁽¹⁾	.496	.498	500	495	96						
TYPE TEST	TENSION	ż	_T (1)	.085	986	386	.087	8				s	SS	
F	-	STRAIN IN IN.										STRES	V STRE	۲
PANEL NO.	S:N 14	STRAIR	SPEC. NO.	41	£	47	52	3				AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-3 C

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-14 REDUCED TEST DATA

HICKNESS		AREA		8140.	.0412	7140.	90	8140.						:
NOMINAL PER PLY THICKNESS	2010.	STRAIR	STRESS	.0137	9210.	0136	6210.	.0137				850		
NOMINAL F		MAX	?	33.4	34.6	31.8	32.8	33.1				33.2		
		.030												
RESIN CONT.	36.6%	920												
RESIN	ਲ	920												
		.024												·
ND.	NIMO	.022												
TEST COND.	220 ⁰ F FOR 10 MIN	020												
TE	220°F	810.												
g	DAYS	910.	īŞ.								-		<u> </u>	
SPEC. CONDITIONING	86% RH⊕ 125 ⁰ F FOR 42 DAYS	10 .	STRESS - KSI	,					 -					
CNDIT	15°F F(.012	K	30.2	31.2	28.8	31.2	30.2	 			30.3		
PEC. C	RH® 12	010		25.8	26.8	24.8 2	28.7	26.8 3	 			36.0	-	-
S	898	900		21.0	22.0	20.2	21.8	21.0	·			21.2	-	
NOI				•		9		2				 	-	-
TEST DIRECT	90 ₀	900:		0 16.	6 17.0	8 15.	4 16.8	0 16.				2 16.3	-	-
TEST D		8		5 11.0	9 11.6	4 10.8	9 11.4	7 11.0				11.2		
		.002		06.5	06.9	06.4	06.9	06.7		1		5.7	ļ	
EST	NO		w(1)	.497	.486	984	.493	86	 					
TYPE TEST	TENSION	.N.	τ(1)	8	.083	.	.082	.082				 SS	ESS	
PANEL NO. T	S/N 14	STRAIN INJIN	SPEC	%	108	113	136	142				AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-30

TABLE - AIII-15 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ST	TE	TEST DIRECT	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	و		TEST COND	9	α	RESIN CONT	F	NOMIN	NOMINAL PER		PLY THICKNESS
3/N 16; S/N 14	TENSION	z		00		*	400 ⁰ F FOR 100 HRS	OR 100	HRS		400°F	400°F FOR 30 MIN	Z		35.6%			10.	0104	
STRAIN IN /IN	J.N.		200	8	8	800	010	210	014	910.	810	020	220	024	920	820	030 MAX	33	STRAIN	AREA 3
SPEC	(1)	W(1)						8	STRESS · KSI	KSI							;		STRESS	Z.
S/N 16 - 12	.082	.496	05.6	11.3	16.9	22.2	27.6	33.0	37.8								41.8		95. 98.	.0407
14	280	.496	(I) 05.6	11.8	17.2 '	22.6	28.0	33.2	₩ ₩								40.2		.0146	.0407
91	88	8	0.90	11.7	17.2	22.6	27.8	33.2	38.2								41.3		.0154	.0407
82	.082	.497	8:90	11.8	17.2	22.6	28.0	33.1									36.6		0133	.0408
&	.082	496	6.90	11.4	17.1	22.4	27.5	33.0									37.9		0130	.0407
46	8	.	28.2	12.2	17.9	23.4	28.9	3.4	8	4,2	,						45.0		.0164	2040
47	.88	8	06.3	12.3	17.7	23.0	28.5	33.8									34.8		0129	.0407
51	982	8	6.90	11.9	17.8	23.1	28.4	33.8	99.0	·							39.2		.0143	.0421
S/N 14 · 150	8	8	4.8	12.0	17.4	22.9	28.3	33.1									34.0		0129	St 35.
157	986	.408	96.9	11.3	16.5	22.0	27.3	32.0	36.8								41.0		0160	.0421
AVERAGE STRESS	SS		\$.0	11.8	17.3	72.7	28.0	33.3									39.2		.0146	
STAPIDARD DEVIATION STRESS	ESS		12	.37	\$	\$.47	2									3.40		90128	
AVERAGE STRESS-3 C			5.2	10.7	16.0	21 -	28.2	30.8						·			29.0		0107	

FOOTNOTES: (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-16 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	TE	ST DIR	TEST DIRECTION	,	SPEC.	COND	SPEC. CONDITIONING	ğ	TE	TEST COND.	٥	α	RESIN CONT.	ONT.	NO.	NAL PE	NOMINAL PER PLY THICKNESS	IICKNESS
S/N 14	TENSION	N		906		*	400°F FOR 100 HRS	001 RC	HRS		400°F	400°F FOR 30 MIN	Z	ļ 	36.6%	*			2010.	
STRAIN . IN./IN.	I./IN.		000	8	900	800	010.	.012	.014	910.	810.	020	220.	024	920	820	020	MAX	STRAIN	AREA
SPEC	(1) _T	(L).M		11				•	STRESS - KSI	<u>5</u>			1			1	<u>, </u>		STRESS	N.
92	.082	\$	8	8.4	14.3	19.4	24.0	28.3	32.7						<u> </u>			3.8	0146	90
78	.082	496	1.8	10.3	15.2 ,	20.2	24.6	0.8						_	-		<u> </u>	31.2	9210.	9040.
18	.082	.	8.4	10.3	16.2	19.0	24.1	2R.6	33.0								<u> </u>	33.5	.0141	9040
83	280:	485	06.7	10.8	15.5	20.6	28.1	28.4								1		31.2	0126	9040
114	.083	495	94.8	8.60	14.7	19.5	24.0	28.3					 				<u>س</u>	32.8	0140	0140.
115	280	4	06.9	10.7	15.5	20.0	24.2	28.3						 			\$;	6	0139	0140
116	.08	86	06.7	10.4	15.4	20.2	24.6										-	29.3	0120	9040
118	.082	984	94.9	09.8	14.7	19.5	23.7	28.0								-	<u>ب</u>	32.0	0136	7040.
121	.082	99	94.4	4.60	14.1	18.7	23.2	27.6	,								9	31.0	5137	8040
122	780	.496	04.9	09.7	14.8	19.7	24.1	28.4									<u>«</u>	32.5	0136	9040
AVERAGE STRESS	ESS		5.1	10.1	14.9	19.7	24.2	26.55										32.0	86	
STANDARD DEVIATION STRESS	RESS	31	8	19.	8	Ź	.52	.57							-		-	3	9/000	
AVERAGE STRESS-30		ř.	3.2	8.6	13.4	18.1	22.6	26.8									2	7.12	C112	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPASE

(I) CURVE IDEALIZED

TABLE - AIII-17 REDUCED TEST DATA

PANEL NO	TYPE TEST	EST	F	TEST DIRECT	RECT'ON	2	SPEC.	COND	SPEC. CONDITIONING	ي	TE	TEST COND	9	_	RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N 6	TENSION	z		ಹಿ			460	F FOR	460° F FOR 100 HRS.		460° F	460° F FOR 30 MINS.	MINS.		35.6%		-	1010.		
STRAIN IN IN	71V		000	8	900	900	010	27.2.	₽10 .	910.	810	020	.022	024	980	820	020	MAX	STRAIN	AREA
SPEC NO	τ(1)	(1) ₩							STRESS - KSI	KS.	1								STRESS	N.
S/N 6 · 11	188	8	06.2	10.8	16.1	21.3	38.5	31.6										34.6	.0133	0400
£,	8.	8	8.	10.9	16.4	21.4	26.5	31.8	36.8									37.8	.0144	20402
15	180	96	06.7	11.3	16.8	22.0	27.1	32.3										36.5	2610.	C402
17	8 6	9	8	11.8	17.2	22.4	29.4	32.8					 					36.8	7£10.	2040
19	8	98	0.80	11.7	17.3	22.6	22.8	33.1	38.3									38.7	.0147	2040.
																		Ī		
AVERAGE STRESS	SS		5.7	11.3	16.4	21.9	26.5	32.3										38.7	00.0	
STANDARD DEVIATION STRESS	4ESS									-										
AVERAGE STRESS-30																				

TABLE - AIII-18 REDUCED TEST DATA

NESS		AREA	• .	94	80	9040	9000	1040						
THICK				•		٥	٥	٥			 			
ER PLY	8	STRAIN	STRESS	.0133	.0137	2010.	9110.	0120				2210.		
NOMINAL PER PLY THICKNESS	20.	MAX	200	28.2	28.9	26.3	26.4	26.9				73.3		
2		080												
CONT		920												
RESIN CONT	36.8%	920												
_		.024												
Q	N	220.												
TEST COND	450°F FOR 30 MIN	020		1										
=	450°F	810												
و		910.	KSI											
SPEC. CONDITIONING	HRS	10.	STRESS KSI											
CONDI	100 H	210.	S	23.5	26.1	,	,	25.9						
SPEC.	450°F FOR 100 HRS	010		20.1	21.9	24.4	21.4	21.7				21.9		
-	\$	80		16.1	17.5	19.8	17.5	17.6				17.71		
CTION		8		12.0	13.1	15.1	13.3	13.1				13.3		
TEST DIRECT	00.6	8		08.0	9.80	10.1	1.60	6.80				8.9		
TES		200		04.3	8	06.2	8.40	04.5				4.6		
12	-		W(1)	.493	264	\$	495	2				141		
TYPE TEST	TENSION	ż	(1)	8	.08	86	280	8 6					×	
۲	ī	N.										STRESS	STRE	
PANEL NO.	S/N - 14	STRAIN IN/IN.	SPEC. NO.	S/N 14 · 80	83	117	120	123				AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-3 O

FOOTNOTES (1) TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-19 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ST	1	TEST DIRECT	ECTION	_	SPEC.	CONDI	CONDITIONING	ဋ	=	TEST COND	Ģ	<u>"</u>	RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N4,S/N8,S/N3 CC	COMPRESSION	NOIS		စ			1Hr •	-66°F			-86°F	-85°F For 30 Min	Z c		36.6%		-	5010		
STRAIN IN./IN.	./IN.		200	8	900	8	010	210.	410.	910.	810	020	220	10.024	920.	820	083	MAX	STRAIN	AREA
SPEC NO.	T(3)	W(1)						5	STRESS	.KS								2	STRESS	IZ.
S/N4 4	188	750	07.2	15.5	23.2	30.4	37.6	44.7	62.0	4.09	0.69	1						75.4	6610.	9090
01	8	750	08.3	16.7	23.8	31.7	38.4	46.2	62.1	50.0	65.4	7.17	78.C	83.0	-			83.7	.0243	0000
28	180.	. 75d	07.0	17.7	28.0	34.6	41.7	48.6	55.7	61.7	70.9	79.8	ı		147			82.3	1120	7080.
E)*	280	740	11.0	18.4	26.0	32.8	40.6	51.5	61.3	1								70.3	.0156	3190.
51	180	750	07.4	15.5	21.8	29.6	36.8	43.6	50.6	57.6	66. 2	74.1	20.	ļ				80.9	.0226	7080.
S/N6 211	8	786	10.1	17.6	25.9	32.2	39.6	46.3	1.53	8.5	6.39	ı						87.8	381.7.	1280.
212	583	761	8.	10.4	20.8	28.1	34.5	41.3	48.1	54.5	1.08	66.2	70.0	1		_		73.7	.0237	.0624
213	28	740	7.70	14.7 21.7	21.7	28.5	36.4	41.9	48.4	54.7	61.2	8.8	72.0	1	-			73.6	9220	4180.
214	9.00	.7 46	7.80	19.6	28.2	32.6	40.6	47.3	54.3	80.9	8.8	ı						71.4	.01 96	.0882
S/N3 III	28	.751	07.4	14,9	22.8	30.1	37.4	65	51.2	67.7	63.9	70.2	76.0	82.1				80.3	.0248	31,90.
AVERAGE STRESS	98		8.2	16.0	24.2	31.2	38.5	46.4	62.7									76.2	.0213	
STANDARD DEVIATION	AATION		1.57	2.43	2.36	2.17	2.36	2.90	3.84								11	5.88	.00282	
AVERAGE STREET + 3 0			4.5	8.3	17.1	*	3.12	38.7	41.2									58.8	8010x	·

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AIII-20 REDUCED TEST '14TA

PANEL NO.	TYPE TEST	EST	16	ST DIE	TEST DIRECTION	<u> </u>	SPEC.	COND	SPEC. CONDITIONING	ā	=	TEST COND	و ا		RESIN CONT	TNO:	Ž	NOMINAL PER	PLY	THICKNESS
S/N3 CC	COMPRESSION	NOIS		96			1HR	1HR ● -66 ⁰ F			8	-66°F For 30 Min	Z.	-	36.6%		-		3010 .	
STRAIN IN/IN	NI/		200.	100 .	900	800	010.	.012	410.	910.	810.	020	220	1024	920	820	980	MAX	STRAIN	AREA
SPEC. NO.	τ(1)	W(1)] "	STRESS - KS	<u>5</u>				1		1		STHESS	STRESS	N.
2	8 5	.751	08.4	16.2	22.6	29.3	36.2	42.0	46.7									51.2	.0167	1580
8	8 6.	740	97.0	15.4	21.6	28.2	34.2	30.0	44.7	51.3								52.1	7910.	9290
13	.083	.751	07.1	12.8	19.7	26.7	33.3	38.6	46.8	51.2	ı							7.7	9710.	7 280
18	86 .	.751	10.9	18.6	27.3	8,	43.3	60.5										56.3	.0138	428 0.
19	8	.751	0.90	17.3	24.0	30.5	37.0	43.2	40.5	55.4	_							57.7	8910,	9250
67	8. 83	.740	07.2	13.7	20.1	26.5	32.6	38.3	44.1	46.4	54.4	ı						65.2	.0193	1280
98	88	.76i	07.1	14.1	20.8	27.1	33.0	38.5	44.6	49.8	54.3	ı						54.9	.0187	.0624
88	280	.751	10.9	18.5	26.5	32.1	38.5	44.5	50.4	55.9	61.0	ı						61.6	.0183	.0624
11	.082	.750	4.60	19.1	27.0	36.0	ı											43.4	6600.	3130.
74	.083	.740	1.80	15.3	21.9	28.2	34.6	38.4	41.9	45.3	48.3	51.4	2.5	57.2	0.08	62.4	1	62.7	.0286	280
AVERAGE STRESS	88		8.6	16.0	23.0	29.8												56.0	.0176	
STANDAND DEVIATION	VIATION		1.38	2.23	2.77	3.66											-	82.4	00476	
AVENAGE STRESS	83		4.2	9.3	16.7	18.8												42.3	.0032	

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCUARED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AIII-21 REDUCED TEST DATA

PANEL NO.	TYP	TYPE TEST		TEST	. DIRE	TEST DIRECTION		SPEC.	CONDI	SPEC. CONDITIONING	ç	Ī	TEST COND	NO.	<u>"</u>	RESIN CONT	CONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HCKMESS
S/N6	COMP	COMPRESSION	z	5	00			125°F @ 95° for 42 Days	125 ⁰ F @ 95% RH for 42 Days	Ŧ.		-65°F	65°F For 30 Min.	Min.		35.6%			8600		
STRAIN IN /IN	N./IN.		-	.002	20	900	800	010.	210.	.014	910.	810.	.020	.022	.024	.026	.028	080	MAX	STRAIN	AREA
SPEC NO.	<u> </u>	(1) ★	(E)**						3	STRESS	KSI								SI KESS	STRESS	N . <u>₹</u>
169	8.	98	750	08.5	17.5	25.8	35.0	43.3	62.0	0.0	67.5								71.4	0110.	0090
172	8.	680	748	11.6	22.5	33.3	43.2	51.2	1.98	1									0.40	9610.	9190.
176	Ö,	.072	.750	09.3	19.6	29.4	41.8	55.5	65.5	1									66.5	.0120	.0540
178	083		.750	08.4	18.1	25.8	33.7	4.1	48.6	57.8									64.7	.0154	.0823
180	č.	.082	.750 (09.6	18.7	27.3	38.2	44.9	53.2	59.0									65.3	.0157	3180.
189	g	. 082	.750 (08.1	17.4	26.0	34.2	41.7	49.6	67.0	84.3	1							70.5	.0167	3180.
212	Ö.	.079	.751	10.6	20.3	29.6	38.0	46.5	8.6	62.1	4.08	75.0	ı						77.3	.0186	0883
218	ă.	.083	749	1 8.60	18.5	26.6	36.2	43.4	51.0	0.99	88.3	ı			T				8.88	.0166	.0621
229	,ö.	. 770.	.751	07.8	15.4	22,8	34.7	42.5	50.3	57.6	65.0	72.3	,					2-14.	73.2	7610.	8730.
230	.o.	.079	.749	08.3	16.2	26.2	33.4	40.8	48.3	9.7	50.8	0.7	,						66.2	0610.	.0642
AVERAGE STRESS	RESS		dash	08.2	18.4	27.2	36.5	46.1	53.2										88.8	29.5	
STANDARD DEVIATION	EVIAT	8		1.02	2.06	2.91	8	4.42	5.38										4.36	.00233	
AVERAGE STRESS	RESE			6.1	12.3	18.5	24.4	31.8	37.4										5.5.7	9800	
																	1				

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE : DEALIZED

TABLE - AIII-22 REDUCED TEST DATA

PANEL NO.	TYPE TEST	TEST	"	TEST DIRECT	ECTION	7	SPEC	CONDI	SPEC. CONDITIONING	ဋ	F	TEST COND.	N N	Ľ.	RESIN CONT.	ONT	Ž	NOMINAL P	PER PLY TH	PLY THICKMESS
S/N6	COMPRESSION	SSION		906		ō	95% RH @ 125 ⁰ F For 42 Days	125°F	: For 42	Devs	-65%	-85°F For 30 Min	Z.		3£.6%			.0093		
STRAIN	N./IN.		.002	200	900:	800	010	.012	10.	910	810.	020	220	920	0.26	620	020	MAX	STRAIN	A.REA
SPEC. NO.	(t)_	(1) w						· S	STRESS - KSI	KSI								200	STRESS	√ <u>Z</u>
190	8 6	.750	(3)	18.3	28.2	37.6	46.5	55.2	1									58.3	.0122	0870
194	870.	.750	4.60	19.7	29.1	38.2	47.0	55.0	'									₹.08	.0133	.0585
196	.079	749	08.5	16.9	23.7	31.6	30.6	47.1	53.3									57.1	0.158	.0692
200	0.00	.750	07.4	15.0	22.4	30.4	1											37.1	8600	9
201	690:	749	1.88	15.7	24.4	32.1	36.7	47.4										51.0	3.0.	.0516
202		.749	09.3	18.4	26.7	34.6	42.0	£8.3	1									49.9	30106	,0539
232	.083	.751	10.9	18.8	26.4	33.7	40.3	47.4	52.1	ı								53.3	.0143	.0823
233	.034	.750	07.8	15.3	23.0	30.3	37.8	45.4	52.0	57.3	1							1.85	.0161	0000
235	8 6.	157.	(I) 06.5	12.8	(E) 18.8	45.2	30.8	36.9	41.9	48.0	52.1	ı						54.3	1610.	0630
237	18 5	.75	05.2	12.0	25.3	18.5	21.9	25.2	23.6	31.8	35.3	38.5	41.8	4.5	47.5	50,3		51.8	.0292	.0630
AVERAGE STRESS	rRESS		28	16.3	23.8	31.1												52.9	.0158	
STANDARD DEVIATION STRESS	STRESS		1.61	2.58	4.25	6.19												6.32	.00572	
AVERAGE STRESS-3G			3.4	8 5	11.0	12.4												·s	.0014	

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETFY SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-23 REDUCED TEST DATA

HICKNESS		AREA		98-30:	.0625	.0620	8080:	3890.								1.
ER PLY TI		STRAIN	STRESS	.0139	9210.	.0151	.0200	.0136						39.5		
NOMINAL PER PLY THICKNESS	9600.	MAX	2	56.9	8.09	64.2	56.3	59.6						9 9		
2	-	930										111				
CONT.		028														
RESIN CONT.	35.6%	.026				·										
		.024			+								_			
ō.		220														
TEST COND		020	-				1				 	 	-			
TE	25°F	910.					50.4							<u> </u>		
	Ueys	910.	KS.		57.7	ı	1,84		<u> </u>							
ONING	For 42	014	STRESE - KSI	 	52.7	56.1	43.4		-	<u> </u>						
SPEC. CONDITIONING	95% RH @ 125 ^o F For 42 Days	210	ST	£8.3	47.3 5	45.8 5	37.8	52.4								
PEC. C	S RH @	010.		68	36.8	38.3	31.2	44.7						37.6	<u> </u>	-
<u>s</u>	828	800		3.9	73.5	29.7 3	24.7 3	39.2						31.0		
NO.															ļ	
TEST DIRECTION		4 .006	}	7 23.7	.8 23.3	.7 22.1	18.9	.0 32.1						24.0		
rest c	00	.004		3 15.7	3 16.8	1 13.7	1 13.8	2 22.0						18.		
_		.002		1 07.3	G 09.3	7 06 1	1 07.1	10.2						80		
EST	SION		W ⁽¹⁾	.751	750	747.	.751	.749								
TYPE TEST	COMPRESSION	2	(1)	.073	070	.083	180	9.00						S	SS	
PANEL NO. T	S/N6 COM	STRAIN IN/IN	SPEC NO.	174	175	221	222	228						AVERAGE STRESS	STANDARD DEVIATION STRESS	AVERAGE STRESS-30

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

W SURVE IDEALIZED

TABLE - AIII-24 REDUCED TEST DATA

1012 014 016 018 020 022 024 026 028 030 MAX STRAIN A STRAIN A STRAIN A 48.6 -	TYPE TEST TEST DIRECTION	TEST DIRECTION	T DIRECTIC	CTIC	NO	<i>I</i>	PEC. C	DIGNO	SPEC. CONDITIONING		T E	TEST COND	و		RESIN CONT	ONT	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
46.3 STRESS -KSI 46.4 STRESS - STRESS	COMPRESSION 90°	906	906			¥96	RH	125°F	For 42 (Deys	52	L.			35.6%			9800		
46.3 - 51.8 .0140 46.4 - 51.8 .0140 46.4 - 51.6 .0138 40.5 - 50.3 .0146 40.5 - 65.0 .0136	STRAIN . IN./IN002004 .006 .008	.004	900:		8		010.		├		├	023	720.	.024	920	920	-	MAX	STRAIN	AŘEA
46.4 51.8 .0140 46.4 51.6 .0138 46.4 48.6 50.3 .0149 40.5 46.5 .0136	T(1) W(1)					1		ıs	RESS	KSI								2	STRESS	ž
46.4 61.6 0138 46.4 48.6 50.3 0149 40.5 53.4 0088 40.5 6.5 0136 40.5 6.5 0136	.079 .750 07.3 16.6 28.4 24.8	16.6 28.4	26.4		24.8		40.5											51.8	.0140	.0883
46.4 48.9 - 50.3 .0149 40.5 - 6.5 .0138 40.5 - 6.5 .0138	.080 .751 07.1 13.5 20.8 28.6	13.5 20.8	20.8		28.		38.2											51.6	9210	.080
40.5 46.5 .0136	.079 .751 08.6 15.4 22.4 29.6	15.4 22.4	22.4		28.		$\overline{}$			I								50.3	.0149	.0593
40.5 46.5 .0136	.077 .749 07.8 16.3 30.9 41.4	16.3 30.9	30.9		4		1											23.4	9800	9/30.
	.083 751 07.6 15.2 21.8 28.7	15.2 21.8	21.8		78.7		34.5	├	1									¥6.5	9610.	.0824
	:		:	:	:															
						ł			-											
						l														
 																				
						ł						-								
	AVERAGE STRESS 7.7 15.4 24.5 30.8	15.4 24.5	24.5		30.6					-								50.7	0132	
							-													
								-		-	-									

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-25 REDUCED TEST DATA

PANEL NO.	TYPE TEST	EST	TE	TEST DIRECT	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	ق	1 1	TEST COND	Q		RESIN CONT.	ONT.	2	MINAL P	NOMINAL PER PLY THICKNESS	ICKNESS
S/N &	COMPRESSION	NOIS		%			PON A	96% RH @ 126 ⁰ F FOR 42 DAYS	5°F			P,			36.6%		-	.00e3		
STRAIN - IT./IN.	N./IN.		.002	90.	900	806	010	210.	10.	910.	810.	020	220.	.024	920.	920	88	MAX	STRAIN	AREA
SPEC NO.	(E)_	W(1)						8	STRESS - KS	ig.								200	STRESS	Z.
187	670.	.749	(1)	15.1	23.3	29.8	37.1	46.5	50.5	1								6.63	.0167	8890
170	680	.751	(E) 08.7	17.2	26.7	34.6	43.0	51.8	-									52.3	.0122	.0625
173	1.00.	.750	08.5	16.7	26.0	32.5	42.5	50.3	57.4									0.08	3 10.	.0633
181	8 6	.750	06.3	11.2	16.1	19.6	23.0	27.8	34.6	40.0	47.0	53.5	,					53.6	.0120	.0607
182	8 6.	.750	8.	17.7	29.0	30.6	46.5	ı		-								63.5	0120	7080.
183	.072	746	09.3	18.0	28.7	34.4	41.9	47.5	61.1	53.3								67.6	9800	.0640
18F	.072	.750	11.7	17.5	27.2	37.0	8.6	7 .≘										54.8	(1)	0840
186	1.00.	.751	08.5	17.4	26.8	38.6	8.0	č3.2										66.0	(E) 0123	.0633
186	070	.760	09.3	19.0	27.6	36.7	43.0	61.0	-									62.4	.0123	.0626
188	.079	.760	08.9	16.7	26.3	32.9	40.5	47.0	1									51.5	.0129	5663
AVERAGE STRESS	ress		8.8	17.6	26.2	33.3	41.0						ì					- 2 8	e 10.	
STANDARD DEVIATION STRESS	RESS		1.38	2.39	40.2	5.31	8				,_							2.63	.0002	
AVERAGE STRES:30			9.4	10.4	14.1	17.4	20.1											47.2	9500:	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT JELETED FROM AVETAGES BECAUSE OF COMPRESSOMETER SLIPPAG:
(I) CURVE IDEALIZED

TABLE - AIII-26 REDUCED TEST DATA

STRAIN IN / IN. SPEC T(1) W(1) 191 .075 .748 193 .079 .750	07.4	18.3		_	95% RH @ 125 ⁰ F	8 12E	L L											
MIN IN/IN. 1 (1) 2 0.078		18.3				DAYS			Œ	RT			35.6%	*		6600		
1 .075 3 .079 3 .078		18.3	900	90	0,0.	012	10.	910	910	020	220	0.024	920	820	080	MAX	STRAIN	AREA
270. 870.		18.3				2	STRESS	<u>s</u>			1	1	1	1		N HESS	STRESS	Z.
870.			28.1	33.6	38.3	\$0.4	42.4	1								4.0	3 810.	1990.
870.		13.9	20.7	26.2	29.7	33.1	38.3	38.8	41.5	1,1	,					46.3	120 .	.0593
	_	14.2	19.0	22.7	28.1	28.4	30.3	32.2	8.28	8.4	2 .	38.8	·			9.09	0350	.0685
197. 150.	13.0	22.6	23.0	33.1	35.9	38.4	41.2	0.1	47.3	8.0						51.5	.0212	୍ଜ୍ୟ
047. 070. 981	03.8	08.8	14.5	20.2	-						-					29.2	0010.	0625
245 .083 .749	9.90	0.60	12.5	15.4	18.5	21 4 2	24.2	27.2	7.82	32.3	33.9	8.8	37.5	38.4		68.5	086	.0622
246 .079 .744	88.7	18.9	27.8	36.0	43.1	47.6										52.4	00.00	.0592
247 .083 .745	1.70	11.5	15.5	22.1	27.6	33.4	40.2	8.4								47.8	.0162	.0620
248 .083 .749	9 3	13.7	20.1	27.8	34.6	41.2	46.8	ı								51.4	9510.	.0622
249 083 751	07.2	13.9	20.8	28.7	35.4	42.8										68.5	.0128	0624
AVERAGE STRLSS	7.4	14.5	20.8	26.6												47.0	0200	
STANDARD DEVIATION STRESS	2.36	4.38	5.96	6.50												6.78	98800	
AVERAGE STRESS-3 <i>G</i>	0.32	*	2.9	5.9										-		26.7		

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPEH
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-27 REDUCED TEST DATA

NOMINAL PER PLY THICKNESS		L	N.	6090	8080	1080.	1080.	9190.	30615	3190.	1530	.0621	9090			
ER PLY T		STRAIN	STRESS	0316	.0146	.0273	.0156	9910.	9/10	.0136	.0163	87.10.	9810.	0610.	.00575	8100.
OMINAL	2010.	MAX	201	57.6	55.4	6.09	47.6	96.0	58.7	46.8	49.4	6.13	63.0	7.38	5.40	38.3
2		020		55.2			_									
CONT	*	.028		53.5		_										
RESIN CONT	35.6%	920		51.5		58.9										
		.024		49.6		56.9										
Q	N N	022		47.8		6.43										
TEST COND	160°F FGR 30 MIN	020		46.0		53.5							1			
=	160°F	0.18		4.0		51.1		ı	_		1		46.8			
D G		910.	KSI	42.3	1	48.3	1	54.0	54.5		48.5	ı	41.5			
SPEC. CONDITIONING		014	STRESS - KSI	40.4	53.4	46.0	40.9	48.8	49.0	1	41.8	46.8	49.3			
CONDI	NONE	210	S	38.4	46.2	43.0	36.0	42.8	42.6	40.5	8.0	38.2	43.4	40.7	3.41	30.5
SPEC.	Ñ	010		33.7	33.5	37.6	31.1	37.0	38.1	34.2	32.2	30.0	36.6	3.7	2.60	25.7
		88		27.6	30.6	30.6	26.8	29.2	28	27.8	25.4	23.7	29.6	28.0	2.28	21.2
CTION		900		20.7	7.22	22.4	19.9	21.5	22.0	21.3	18.2	17.1	22.5	20.9	1.88	15.2
TEST DIRECT	00	8		14.3	15.3	15.5	11.5	14.6	15.1	14.5	11.9	10.6	15.8	13.9	1.89	8.2
TES		000		57.3	0.69	08.3	0.90	07.1	8.8	07.5	6.7	8	6.80	₽.70	1.37	2.7
T.S.	NO.		W(1)	.751	.751	.751	.751	.751	.750	.750	.751	35.	.751			
TYPE TEST	COMPRESSION	z	(E) 1	8 6	8	8	8 6.	.082	.082	.082	2	.083	180.		SZ.	
	36 00	STRAIN IN IN		ر. د		_	2			ch.			10	AVERAGE STRESS	STANDARD DEVIATION STRESS	NGE S-3 J
PANEL NO	S/N 4	STR	SPEC		*	31	33	4	. A.	9	65	8	99	AVERA	STANDA3D DEVIATION	AVERAGE STRESS-3 O

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AIII-28 REDUCED TEST DATA

PANEL NO.	TYPE TEST	ST	<u> </u>	TEST DIRECT	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	٥	1	TEST COND	5	L	RESIN CONT.	ONT.	Ž	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N6, S/N4, S/N3 CC	COMPRESSION	NOIS		တ္တ			NONE				160°F	160°F FOR 30 MIN	NIW		36.6%		-	5010.		
STRAIN - IN./IN.	JIN.		.002	98.	8	806	010	012	410.	910.	.018	020	.022	.024	920	.028	080	MAX	STRAIN	AREA
CPEC. NO.	±(1)	W(1)						°	STRESS · KSI	KSI				1				O I I ESS	STRESS	N.
S/N 6 - 234	.083	.749	8.90	12.2	6.7.9	23.4	29.0	33.3										7.28	.0127	1290
S/N 4-1	080	.751	0.70	13.3	0.6:	24.	30.0	35.0	,									36.8	.0122	1080.
21	.083	092.	0.90	12.6	18.4	28.0	35.4	,										37.8	.0110	.0621
>	.082	.751	05.8	11.3	16.4	22.1	28.6	35.0	,									36.5	₽€10.	9190.
×	.081	.751	6.30	12.7	17.8	25.5	34.5	37.8	ı									39.4	0140	9090
×	.083	.751	6.90	16.0	22.0	27.3	31.6	37.4	1									38.4	.0122	.0624
ž	.083	.750	05.2	10.0	14.5	20.2	25.9	30.4									17.	35.0	.0136	.0621
S/N 3 - 34	48.	.753	06.7	10.9	16.1	22.0	27.6	32.2	-									36.0	2210.	.0633
£	833	.749	9.30	10.3	16.4	23.2	29.5	36.2	1									37.4	.0131	.0621
53	.083	.752	06.3	10.1	14.9	20.2	26.6	34.6	ı									38.1	.0136	.0625
AVERAGE STRESS	SS		6.30	12.0	17.3	23.6	30.0											36.9	0129	
STANDARD DEVIATION STRESS	ESS		1.26	1.80	2.10	2.69	3.15											1.47	68000	
AVERAGE STRESS-3 σ			2.1	6.6	11.0	15.5	25.5											32.5	.0102	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE !DEALIZED

TABLE - AIII-29 REDUCED TEST DATA

ND. RESIN CONT. NOMINAL PER PLY THICKNESS	0 MIN 35.6% .0101	.022 .024 .026 .028 .030 MAX STRAIN AREA	STRESS	49.5 .0147 .0609	54.9 .0165 .0608	42.4 .0138 .0630	47.6 .0149 .0609	53.3 .0146 .0624	41.5 .0131 .0607	48.6 .0140 .0546	40.8 .0107 .0593	37.6 .0078	43.6 .0128 .0801	46.0 .0132	5.66 .00241	
NOMINAL	1010.	-	2	49.5	54.9	42.4	47.6	53.3	41.5	48.6	40.8	37.6	43.6	46.0	5.66	
-		88.				<u> </u>									<u> </u>	_
CONT	æ	.028					per .									
RESIN	35.6	920							! 							
	-	.024				ı										
ġ	N O	022														
TEST COND	160°F FOR 10 MIN	020														
TE	160°F	810.														
(2)		910.	ফ্র		,											
ONINO	S of	.014	STRESS.	42.3	46.4	,	6.44	97.23	1	_						
ONDIT	95% RH @ 125. ⁰ F FOR 42 DAYS	.012	S	41.3	41.4	39.9	38.0	47.3	38.8	42.7	_		40.9			_
SPEC. CONDITIONING	95% R FOR 4	010		34.8	34.5	33.3	32.9	40.9	32.0	35.5	37.5		34.9			_
		800:		28.6	27.9	26.6	26.3	34.4	24.6	28.2	28.7		27.9			-
CTION		900		22.0	21.4	19.9	19.3	26.5	18.2	20.8	19.0	32.9	20.8	22.1	4.44	88
TEST DIRECT	00	8		15.3	14.8	13.5	12.8	16.4	12.0	13.8	12.2	22.6	14.3	14.8	3.08	5.6
TES		.002		9.80	08.2	07.2	06.4	6'90	06.2	6:90	6.50	11.7	06.2	7.4	1.71	2.3
<u>+</u>	Z O		E _A	.752	.751	.750	.752	.751	.750	.749	.750	.750	.752			
TYPE TEST	COMPRESSION	j	(E)_L	180	180.	.084	180.	.083	180	.073	920.	.085	080		Ŋ	
Ţ	COM	. IN./I	<u> </u>										j.	TFESS	STRES	
PANEL NO.	S/N 4, S/N6	STRAIN - IN./IN.	SPEC.	S/N 4 - 13	8	57	29	75	S/N 6 - 189	210	215	220	226	AVERAGE STFESS	STANDARD DEVIATION STRESS	AVERAGE

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AI:1-30 REDUCED TEST DATA

Marie Marie Marie Waller

TEST COND. RESIN CONT. NOMINAL PER PLY THICKNESS	FOR 30 MIN 35.6% .0102	.020 .022 .024 .026 .028 .030 MAX STRAIN AREA	STRESS	36.9 .0141 .0631	35.2 .0136 .0628	38.2 .0118 .0629	36.6 .0134 .0631	35.4 .0130 .0624	36.0 .0*42 .0600	23.7 .0073 .0533	37.7 .0154 .0600	35.1 A .0630	37.9 A .0622	A .0127	A0127
36.6%	920														
30 MIN .022	.020 .022												4	∢	4
85% RH @ 125°F		.010. 410. 210. 010.	STRESS - KSI	27.8 31.8 36.2 -	28.5 33.9 -	31.8 -	28.5 33.3 –	27.2 32.7 -	24.5 29.8 35.4 -		24.5 30.0 34.6 -		23.5 26.0 28.6 30.7	26.0 28.6	28.0
		800: 900:		16.6 22.2	17.4 23.1	19.4 25.8	16.5 22.2	16.0 21.8	15.9 20.7	18.8 –	16.3 20.2		16.4 20.9	├ ── ├	
	₀ 06	.002 .004		06.2 10.3	05.6 11.6	06.7 12.8	.05.4 11.1	05.6 11.1	06.0 09.6	06.6 12.7	05.7 12.2	19.1	05.6 11.4	11.4	11.4
	COMPRESSION	2 / 2	T(1) W(1)	.751	.749	.084 .749	.084 .752	.083	.080	.071 .749	.080 .750	.084 .750	.083 .750	083 .750	.750
	S/N 3, S/N 6 C	STRAIN IN./IN	SPEC NO.	S/N3 &	21	37	52	99	S/N 6 - 192	86	231	238	243	243 AVERAGE STRESS	AVERAGE STRESS STANDARD DEVIATION STRESS

FOOTNOTES (1) TO WEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURPED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES B'JT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-31 REDUCED TEST DATA

			6090:	.0625	.0631	1080.	9790.								
	STRAIN	STRES	.0106	0109	0110.	(=)	(I) 0.158						.0125		
	MAX	2	44.9	39.0	40.3	42.4	45.5						42.4		
-	.030														
y R	028														
35.69	920.														
	.024														
O MIN	.022														
FOR 1	.020														
220°F	810.		} 												
	910	<u>s</u>			-	,									
P.F		RESS.			-										
@ 125 DAYS		ST				1									
95% RI- FOR 42	.010		41.7	32.0	36.1	29.8	34.9						34.9		
	800		31.2	24.4	29.3	23.3	27.1						17.72		
	8		20.6	18.4	22.3	16.7	19.5						19.5		
00	904		13.2	12.0	16.2	10.5	14.9						13.4		
	000		9.90	05.3	7.80	0.50	1.98						06.3		
NO		(1)	.751	.752	.751	.751	.751								
PRESS	2		.081	.083	.084	86.	720.							1 12	
	STRAIN IN /II	SPEC	20	41	88	20	88						AVERAGE STRESS	STANDARD DEVIATION STRES	AVERAGE STRESS-30
	S/N 4 COMPRESSION 0° 95% RH @ 125°F Z2U°F FOR 10 MIN 35.6%	COMPRESSION 0° 95% RH @ 125°F 22 L°F FOR 10 MIN 35.6% 35.6% STRAIN IN /IN 002 004 006 008 010 012 014 016 018 020 022 024 026 028 030 MAX STRAIN	STRAIN IN STRAIN IN STRAIN IN IN. COMPRESSION OO 100 OO OO	STRAIN IN AN AN AN AN AN AN AN AN AN AN AN AN AN	STRAIN IN STRAIN IN COMPRESSION COMPRESSION	STRAIN IN/IN. SPEC. T(1) MAX STRAIN STRAI	Compression Compression	STRAIN IN STRAIN IN STRAIN IN STRAIN IN							

FOOTNOTES: 11 TO NEAREST .001"

⁽A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-32 REDUCED TEST DATA

TVP	TYPE TEST	1	TE	ST DIR	TEST DIRECTION	z	SPEC.	SPEC. CONDITIONING	TIONI	NG	118	TEST COND.	Q	.	RESIN CONT	ONT.	NOM	MAL PE	R PLY T	NOMINAL PER PLY THICKNESS
OMP	COMPRESSION	NO.		°06			95% ROR	95% RH @ 125 ⁰ F FOR 42 DAYS	250F YS		200	220°F FOR 10 MIN	NIM OF		35.6%					
STRAIN IN/IN.			.002	900	98.	90. 80	010.	210.	410.	910.	810.	020	.022	.024	920	820.	JED:	MAX	STRAIN	∴REA
-	Ę	W(1)							STRESS - KS	S				1			7		STRESS	Z Z
٠,	.072	.750	6.30	12.0	18.0	232	_										-	27.6	.0093	0640
);	1 /0.	.750	9.90	11.3	15.8	19.6	23.1	26.0								-	2	28.9	.0133	.0633
٠,	070	.749	06.1	12.0	17.2	22.5	ı										7	28.0	3600:	.0625
-	8.	.749	9:90	11.9	17.4	22.1	27.8	ı									F.	31.7	.0116	280.
٩	.083	.750	≘°9.	10,9	16.2	21.7	27.4	_									2	28.8	.0103	.0622
					,															
																	-			
															<u> </u>					
AVERAGE STRESS			6.30	11.6	16.9	21.8										 	7	29.0	6010.	
STANDARD DEVIATION STRESS	٠,٠																			
																-				

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-33 REDUCED TEST - 4TA

	TES	T DIRE	TEST DIRECTION	_	SPEC.	CONDI	SPEC. CONDITIONING	V.G	1	TEST COND	Ö.		RESIN CONT	ONT.	NOMINAL PER		PLY THICKNESS
i		00			100	100 Hrs @ 400°F	000°F		400	400 ⁰ F For 30 Min	30 Min		35.6%				
005		8	98	800.	010.	.012	.014	910.	810	020	220.	.024	920	0. 820	030 MAX	STRAIN	AREA
]] "	STRESS	<u>8</u>		1 							
9.90	-	12.6	18.2	23.8	29.6	1									31.1	.0103	9080
07.1	\vdash	14.2	20.4	26.8	32.8	39.2	-								0.2	.0132	.0800
06.5		14.2	22.3	30.4	1									-	36.7	8600	1090
05.3	\longrightarrow	11.1	17.8	23.8	29.7	1.98	-								35.4	.0121	0593
1.90		12.2	18.4	24.2	30.0	6.36	41.3	-							41.4	.0142	.0594
06.3	- 1	10.5	15.8	21.2	1										23.1	9800	0690
1.98		11.9	17.8	23.5	1										24.5	.0085	.0595
1.98		11.9	17.7	,											21.6	.0072	.0595
04.2		4.60	14.3	19.4	ı										20.5	.0084	9850
(I) 06.9		13.7	20.5	28.2	-										33.2	9600.	.0636
6.4		12.2	18.3												31.0	.0102	
96:		1.58	2.21												88	92200	
3.5		7.5	11.7												7.8	2003	

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETÉR SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AIII:34 REDUCED TEST DATA

The second secon

PANEL NO	TYPE TEST	EST	T	TEST DIRECT	ECTION	_	SPEC	CONDI	SPEC. CONDITIONING	و	TE	TEST COND	ġ.	œ	RESIN CONT.	=	NOMINAL	PER PLY	NOMINAL PER PLY THICKNESS
S/N 3, S/N 14 C	COMPRESSION	SION		°06	۵		00 1	100 Hrs @ 400 ⁰ F	20°F		004	400°F For 30 Min	30 Min		36.6%				
STRAIN IN	2		200	90	900	900	010	210.	014	910.	810.	020	220	.024	026 028		030 ASAX	<u> </u>	AREA
SPEC	τ(1)	w(1)						Š	STRESS.	<u>3</u>				1				STRESS	
S/N 3 17	.083	.752	06.3	10.1	14.5	ı								<u> </u>			18.2	.0075	.0625
18	7.00.	.740	8 .4	10.7	16.3	22.5	28.7	ı									31.0	3010.	3/50.
95	670	.751	6.49	10.0	15.1	20.0	26.1	1						-	_	-	75.3	.010	9690
73	.083	.751	6.8	11.1	16.3	20.7	1							} i			22.8	800	4.290.
14	.083	750	98.3	13.3	19.8	ı											22.2	c.700.	.n623
35	883	750	6.3	10.5	15.8	20.7											23.2	1600.	.0623
42	86	.749	08.3	14.4	202	ı										-	23.1	.0X 74	4190.
2	.083	.750	96.9	10.9	17.8	22.8	-								-	_	23.9	98 0:	.0623
3	98	750	8 .7	88	14.1	19.2	-									_	23.4	2010:	7090.
S/N 14 8	90.	.747	8.	09.2	15.3	21.9	28.3	ı									29.4	9010.	(1627
AVERAGE STRESS	ESS		08.7	12.0	16.5											_	23.2	.00913	
STANDARD DEVIATION STRESS	RESS		17.5	19.9	602										-		3.26	, you	
AVERAGE STRESS-3 σ			2.1	6.0	10.2									-		-	13.4	600	

FOOTNOTES (1) TO NEAREST 001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

TABLE - AIII-35 REDUCED TEST DATA

PANEL NO	TYPE TEST	TEST		TES	TEST DIRECT	ECTION		SPEC	CONC	SPEC CONDITIONING	S N		TEST COMD	QF;C		ESIN	ESIN CONT.	Ž	NOMINAL PER FLY THICKNESS	ER FLY T	HICKNES
S/N 4	COMPRESSION	ESSIO	z		00			10	0 Hrs	100 Hrs @ 450°F		460	450°F For 30 Min	30 Min			35.6%				
STRAIN IN./IN	NI/NI			.002	A 00	900	900	010	.012	A10 .	.016	810	020	022	024	920	920	0.8	MAX	STRAIN	AREA
SPEC	(1)		(L)M							STRESS . KSI	S KS								STRESS	STRESS	
6	6.00	\vdash	751	06.5	118	<							_				-		19.1	.01.92	
82	870.	$\overline{}$) 157.	0.90	11.7	-											: !		14.2	.00,145	.05.86
82	970.		0 097.	6.30	13.5	1										,			8.71	94(-0)	.0592
8	80.	$\overline{}$	750	0.8	12.0	∢													21.3	<	000
и	.077	\neg	.751	0.0	12.3	ı													15.0	9 00:	7/90
		-																			
		-																			
AVERAGE STRESS	rAESS			6.7	62) š	Ę	
STANDARD DEVIATION STRESS	STRESS																				
AVERAGE STRESS-30																		,			

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM
AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED

TABLE - AIII-36 REDUCED TEST DATA

PANEL NO.	TYPE TEST	TEST		rest (TEST DIRECTION	TION	8	SPEC. CONDITIONING	DITIO	ING	_	TEST COND.	NO.	_	RESIN CONT.	CONT.	ž	MAINAL P	NOMINAL PER PLY THICKNESS	HUKNESS
S/N 4	COMPRESSION	01993	2		006		5	100 Hrs & 450°F	460°F		909	460°F For 30 Min	D Min		35.6%					
STRAIN IN /IN.	IN./IN.		.002	8.		700	010.	210.	9.	910.	810.	020	220.	10.0	8	820	0230	¥ iX	STRAIN	AREA
SPEC. NO.	T(1)		(L)M						STRESS	S · KS	_							2	STRESS	N.
=	9.00	157.	51 04.9	⊢ ⊣	9.60					 								17.13	1700	2090
Ξ	080	1751	51 CG.B		07.5		-											10	1900	0000
5	180	763	සු යා		11.11													16.4		0810
I	080	0 750	8.90 06.8		11.4													16.3		080
×	080	127. 0	51 03.9	10.1	1													1:1.8	1700	0080
AVERAGE STRESS	rress		4.5	6.6	_	덫] ; -	\$	
STANDARD DEVIATION STRESS	STRESS																			
AVERAGE STRESS-8 O																				

FOOTNOTES: (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECOPDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(1) CURVE IDEALIZED

TABLE - AIIf:37 REDUCED TEST DATA

The state of the s

PANEL NO.	TYPE TEST	EST	TE	TEST DIRECT	ECTION	z	SPEC.		CONDITIONING	ū	1.6	TEST COND	NO.	-	N 18 . Y	CONT	2	NOMINAL P	PER PLY TH	THICKNESS
S/N 16, E/N 17 PA	PANEL SHEAR	1EAR		06/0				NONE			-68° F I	F FOR 30	30 MIN		35.6%					
STRAIR IN	NI/NI		10 0.	900	.012	910.	.020	.024	820	.032	8	g.	ş	3	.062	ğ	98	MAX	STRAIN	AREA
SPEC. NO.	Ţ(1)	w(1)] " 	STREES	<u>5</u>								200	STRESS	
S/N 16-6	88,	3.875	06.5	11.7	16.9	18.5	18.8	19.2	19.4	19.6	19.7	19.8	19.8					19.8	.0656	.318
80	88	3.875	06.2	11.1	14.3	16.4	17.7	18.5	19.0	19.3	19.5	19.9	20.0	20.2	20.4			20.6	9630	330
10	980	3.875	06.2	4.60	12.1	14.2	15.6	18.5	17.3	17.8	18.1	18.3	18.5	18.6	18.6	18.6	18.6	18.8	.0672	.310
11	8 8.	3.875	82.5	09.5	12.5	14.8	16.4	17.4	18.2	18.5	18.7	18.9	18.9	18.9	19.0			19.1	0990	310
13	86	3.875	07.0	11.3	14.8	16.3	17.6	18.4	18.9	19.2	19.5	19.6	19.7					19.8	08	314
**	6,0	3.875	9.8	09.3	12.7	15.0	16.2	17.2	17.9	18.2	18.5	18.8	19.0	19.2				19.3	9190.	906.
15	720.	3.875	4.90	10.9	14.1	16.3	17.7	18.7	19.6	20.2	20.5	21.0	21.2	21.5	,			31.6	9840	238
16	870.	3.875	07.0	12.8	15.5	17.5	18.7	19.4	19.9	20.0	20.0	20.0	20.1					20.1	1940.	302
S/N 17 4	8	3.875	8.80	11.6	14.6	16.0	17.1	17.4	17.5	17.5	17.5	7.71	17.9	18.ċ	2.0			18.0	9190.	326
7	180	3.875	08.2	11.3	14.4	16.0	17.2	17.8	18.3	18.5	18.5	18.5	18.5	18.5	18.5		-	18.6	0890	314
AVERAGE APPARENT STRESS	RENT		1.90	10.9	14.2	16.1	17.3	18.1	18.6	18.8	19.1	19.3	19.4					19.6	.0614	
STANDARD DEVIATION APPARENT STRESS	IATION SS		88	1.1	1.42	1.28	8	5	88	88	88	88,	.92					1.06	315000.	
AVERAGE APPARENT STRESS - 3 G	RENT		7	7.6	10.9	12.3	14.2	15.4	15.7	15.9	18.1	16.3	16.6					16.4	9000	
*(.88) × (AVERAGE APPARENT STRESS)	GE APP	ARENT	5.4	8.8	12.5	14.2	15.2	15.9	16.4	16.5	1 6 .0	17.6	17.1					17.2		
*(.88) x (AVERAGE APPARENT STRESS - 3 0)	GE APP . 30)	ARENT	3.6	6.7	9.6	10.8	12.5	13.5	13.8	13.9	14.2	14.3	14.6					14.4		

FOOTNOTES (1) TO NEAREST 001"

(A) COMPRESCOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE :DEALIZED

THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AIII-38 REDUCED TEST DATA

PANEL NO.	TYP. 1EST	EST	TE	ST DIR	TEST DIRECTION	,	SEC.	COND	SPEC. CONDITIONING	ي	15	TEST COND.	و	Ľ	RESIN CONT.	CONT	ž	NOMINAL P	PER PLY TI	PLY THICKNESS
S/N 17	PANEL SHEAR	1EAR		0%0				NONE			25° F F	F FOR 30 MIN	Z	_	36.67					
STRAIN !	NI/NI		8	8	210.	910	028.	8	0.28	ĝ	8	8	\$	8	.062	8	8	MAX	STRAIN	APEA
SPEC.	T(1)	₩(1)						•	STRESS - KSI	9	1							200	STRESS	N.
S/N 17 - 2	8	3.875	06.2	3.60	12.4	14.3	15.4	16.6	16.6	8.8								16.8	, EEO	62820
so.	683	3.875	06.3	00.4	12.2	13.7	14.7	16.2	15.4	15.8	15.9	1.91	16.3	16.5	16.5	,		16.5	.0528	0.322
	<u>8</u>	3.875	⊕ 8 0.0	00.3	12.3	13.5	14.5	15.1	15.3	15.6	16.0	18.1	16.2	16.4	16.5	16.6	,	16.6	.0592	0.322
-	8.	3.875	7.7	7.80	11.6	13.2	14.4	15.0	15.5	15.7	15.9	16.1	1.91	16.1	16.1			16.1	.0644	6Z.E0
9	8	3.875	04.6	08.4	11.0	12.8	14.0	14.8	15.3	15.7	15.9	16.0	16.1	16.2	18.2	16.2	16.2	16.4	07.78	0.373
AVERAGE APPARENT STRESS	ARENT		50	9.1	11.9	13.9	14.6	15.8	15.6	15.9								16.5	9990	
STANDARD DEVIATION APPARENT STRESS	EVIATION RESS	_							-											
AVERAGE APPARENT STRESS - 30	ARENT								j —		 									
*(.88) x (AVERAGE APPARENT STRESS)	AGE APP	ARENT	4.4	8.0	10.5	12.2	12.8	13.4	15.6	15.9								14.5		
*(.88) × (AVERAGE APPARENT ST.1ESS - 34)	AGE APP	ARENT																		

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED
(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM
AVFRAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CURVE IDEALIZED
• THERE WAS AP, ASSUMED FRICTION OF 12% IN PINS

TABLE - AIII-39 REDUCED TEST DATA

PANEL NO	TYPE TEST	EST	¥	TEST DIRECTION	ECTIO	≥	SPEC	COND	SPEC. CONDITIONING	N.G	F	TEST COND	Ď.		RESIN CONT.	CONT	Ž	NOMINAL P	PER PLY TH	THICKNESS
S/N 6 - S/N 18 PAI	PANEL SHEAR	1EAR		0/80			1					FR .			36.6%					
STRAIN IN./IN	2		8	900	210.	910	.020	.024	820.	.032	88	8	3	8	.062	986	090	MAX	STRAIN	AREA
SO EC	(c)_	W(1)							STRESS - KS	. KSI								3	STRESS	N.
S/N 8 - 32	.082	3.875	8.30	8.60	11.8	12.8	·											13.8	<.	0.318
8	670	3.875	8.30	10.0	12.4	,												14.4	1	0.306
\$	88	3.875	86.3	09.2	11.5	13.1												14.0	¥	0.372
S/N 16 · 1	86	3.875	8 .4	1.80	11.4	12.6	13.5	14.0	14.3	14.4	14.7	14.8	15.0	15.0	,			15.1	CZ 90	0.310
4	8	3.875	86.55	4.80	12.2	14.4	14.9	15.3										15.4	.0246	0.310
80	8	3.875	8	8	12.0	13.3	14.2	14.8	15.1	15.5	15.8	16.0						16.0	96140.	0.310
12	28	3.876	0.98	8.80	11.3	12.4	13.7	14.2	14.6	14.9	16.0							16.3	0040	0.318
æ	8	3.876	8	9.8	11.8	12.9	13.8	14.3	14.7	15.0	15.2	15.3	15.3	15.3	15.4	15.5	- 1	15.6	.0502	0.310
2	8	3.875	9, 8	8.80	11.2	12.5	<u> </u>	14.0	14.4	14.6	14.8	15.1						16.3	90,00	0.314
17	2 8 0	3.675	8.4	9.7	11.2	12.7	13.5	14.1	14.3	14.5	14.7	14.7	14.8			-	•	14.8	2940	0.322
AVERAGE APPARENT STRESS	RENT		6.3	9.3	11.7	13.0							-					15.0	0,500	
STANDARD DEVIATION APPARENT STRESS	IATION SS		₹.	₩.	*	7.												4.	2700.	
AVERAGE APARENT STRESS - 30	RENT		4.0	8.0	10.6	11.6												12.8		
*(AB) x (AVERAGE APPARENT STRESS)	SE APPL	ARENT	4.7	8.2	10.3	5											-3	13.2		
*(38) x (AVERAGE APPARENT STRESS - 3 or)	36 1	ARENT	22	7.0	9.2	9.7												11.2		
														1		1	1			

FOOTNOTES: (1) TO MEAREST JOIT

(A) COMPRESSONSTER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSONSTER SLIPPAGE

(I) CURVE IDEALIZED

• THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AIII-40 REDUCED TEST DATA

PANEL NO	TYPE	TYPE TEST		TES	TEST DIRECTIO	ECTION		SPEC.	CONDI	SPEC. CONDITIONING	و	1	TEST COND.	Į .	°°	RESIN CONT	TNO	2	MINAL P	NOMINAL PER PLY THICKNESS	HICKNESS
S/N &	PANEL SHEAR	SHEA	α		06/0				NONE			160° F	160° F FOR 30 MIN	Z.	'	38.6%					
STRAIN	ZI.Z			8	8	.012	.016	82	926	920	.032	ĝ	8	3	8	298.	996	080	MA	STRAIN	AREA
SPEC NO	τ(1)		w(1)						· S	STRESS	<u>5</u>								201	STRESS	Z Z
S/N 6 - 14	ω.	073 3.	3.875 (04.5	07.3	09.2	10.5	1.1	11.5							· · · · ·		-	12.6	.0522	.283
8	.07	.077.	3.875	0.90	98.8	11.4													12.8	.0150	.291
92	8	98	3.875	8	87.0	10.2	11.7	12.8											13.3	9ZZ0.	.325
ಕ	8		3.875	9	7.70	09.3	10.5	11.0	11.4										11.7	.0270	.314
8	88		3.875	8	88	10.0	11.3	12.2											12.8	9234	318
37	9	.075 3.	3.875 (2	7.98	68.5	7.68	10.6	7.	11.9	12.0	12.2							13.0	.0674	192
3	7.70.		3.875	8	07.6	7.89	11.5	11.9	12.5	12.8	,								13.1	M6Z0.	.298
z	86		3.876	8	67.0	7.8	10.8	1 .											13.1	0940	302
TT.	8		3.875	3	97.0	10.0	11.5	12.8										2.2	12.8	.0204	326
ន	8	3.	3.875 (04.7	07.4	1.08	10.1	10.8							-				11.4	0120	314
AVERAGE APPARENT STRESS	PPAREN	_		4.6	7.7	9.7													12.7	.03126	
STANDAND DEVIATION	DEVIATI	8		E,	æ	Q,													.62		
AVERAGE APPARENT STRESS - 30	PPAREN	-		3.8	6.0	17													10.8		
*(.88) × (AVERAGE APPARENT STRESS)	RAGE A	PPARI	ENT	4.0	8.8	₩. 10										†					
*(.88) × (AVE	x (AVERAGE APPARENT STRESS - 3 0)	PPARI	FNT	3.5	5.3	6.2															
			1		1	1	1	1	1	1	1	1	1	1	1	1	1	1			

FOOTNOTES (1) TO NEAREST .001"

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED (C) CURVE EXCEEDED THE GRAPH PAPER

(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

. THERE MAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AIII-41 REDUCED TEST DATA

PANEL NO	TYPE	TYPE TEST		TES	T DIRE	TEST DIRECTION	39	SPEC		CONDITIONING	9	7	TEST COND	Q		RESIN CONT	CONT	ž	NOMINA. P	PER PLY T	PLY THICKNESS
S/N 6	PANEL SHEAR	SHEA	Œ		0/300			100 H	100 HRS AT 4	4000 F		400° F	400° F FOR 36 MIN	N. W.		35.6%					
STRAIN	N / N			8	8	210.	910.	020	.024	820	.032	989	8	ş	8	.082	98	980	MAX	STRAIN	AREA
3. O.	Ē		(£) M							STRESS - KSI	IS .								}	STRESS	<u>z</u>
S/N 6 · 22	88		3.875	0 to	810	02.5	£.	8.8	0.4	8 .3	3	8	4						9.90	₹	.314
8	0.78		3.875 0	6:00	01.7	02.3	02.9	₩.	8.00	1.30	4.40	2.7	85.0	<					6.30	<	305
21	97.0		3.875 0	0.10	9.10	87.6	œ.2	7:83	9.2	9.5	8.48	0.8	8	<					86.5	<	302
ĸ	88		3.875 0	01.1	(1)	7.20	8 .4	8.8	83.7	8.50	2	87	8.2	<					8	∢	.314
	-																				
AVERAGE APPAHENT STRESS	PAHENT																				
STANDARD DEVIATION	RESIDENTIC	Z														ļ			 		
AVERAGE APPARENT STRESS - 3 C	PARENT																				
*(.88) x (AVERAGE APPARENT STRESS)	3.4 GE AF	PARE	F																		
*(.88) x (AVERAGE APPARENT STRESS - 3 0)	AGE AP	PARE	T.																		
																١	1 1				

(A) COMPRESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED (C) CURVE EXCEEDED THE GRAPH PAPER (D) STRESS REPORTED FOR RECORDING PURPOYES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE

(I) CURVE IDEALIZED

. THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

TABLE - AIII-42 REDUCED TEST DATA

PANEL NO	Ţ	TYPE TEST	ST	<u> </u>	TEST DIRECTION	ECTIO	z	SPEC	COND	SPEC. CONDITIONING	Ş.	TE	TEST COND	Q	Ļ	RESIN CONT.	CONT	NOA	NAL P	NONIINAL PER PLY THICKNESS	HICKNESS
S/N &	MAG	PANEL SHEAR	EAR		0,080			8	IRS AT	100 HRS AT 460° F		450° F FOR 30 MIN.	FOR 30	Z	-	36.6%					
STRAIN	NI/NI	z		8	8	210.	910.	020	.024	920	032	88	8	ş	3	78	38	.060 MA	MAX	STRAIN	AREA
SPEC		(1)	(£) ¾							STREES KS	ē							7	_	STRESS	IZ.
S/N6 · 28		89	3.875	0.10	01.7	02.6												8	-	.0152	.310
83		8	3.875	8	01.6													02.0	0	9010	310
8		(D) 770.	(D) 3.875	(C) 00.5	(D) 01.1	(D)	(D)	© 8	(D)	(Q) 08	<u>5</u> 8	3.5	<u>©</u> &	<				03.9	6	4	298
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AVERAGE APPARENT STRESS	PPAR	E Z														<u> </u>	+-				
STANDARD DEVIATION	DEVI,	ATION																			
AVERAGE APPARENT STRESS - 3 σ	PPARI J	ENT																			
*(.89) x (AVERAGE APPARENT STRESS)	ERAGI	E APPA	RENT															-			
*(.88) x (AVERAGE APPARENT STRESS - 30)	RAGE ESS .	APPA 50)	RENT														-				
											1	1	j	1	1	1					

FOOTNOTES (1) TO ! AREST 001"

(A) CO ... ESSOMETER WAS SHUT OFF BEFORE FAILURE OCCURRED

(C) CURVE EXCEEDED THE GRAPH PAPER
(D) STRESS REPORTED FOR RECORDING PURPOSES BUT DELETED FROM AVERAGES BECAUSE OF COMPRESSOMETER SLIPPAGE
(I) CUAVE IDEALIZED

* THERE WAS AN ASSUMED FRICTION OF 12% IN PINS

DATE: 2-17-89 MATERIAL IDENTIFICATION: PANEL RESIN CONT. FILA. ORIENT. EXTENSION TESTS STRAIN GAGE FACTOR: 2.09 STRAIN GAGE FESISTANCE: 120() EXTENSION: PANEL	S/N16 36.0% 0 ⁰	TEST WIDTH THICK AREA LOAD STRESS STRAIN STRAIN POISON'S MODULUS REMARKS	(IN.) (IN.) (LBS.) (KS!) (IN./IN.) (IN./IN.) (A)	HT • 560 .081 .1012 0 0	1012 10 .000328 00300 .1092	2024 20 .000632 .00528 .1195	3036 30 00040 .00947	.001104 .01280 .0863	4460 44 0 .001160 .01420 .0819	RT 1.251 .082 .1028 0 0 3810 LBS CLITOFF	1028 10 .00031C .00336 .0924	2068 20 .Curs iv .00678 .0903	3084 30 .000900 .01012 .0890	3810 37.1 .001132 .01280 .0885			
DATE: 2-17-89 MATERIAL IDENTIFICAT																	

	CTOR: 2.10 SHSTANCE: 350f2 S-400-2AB			320		4420 LBS CUTOFF				4220 LBS CUTOFF										
	STRAIN GAGE FACTOR: 2.10 STRAIN GAGE RESHSTANCE: EXTENSOMETER: S-400-2AB		MODULUS	(12c)						1										
ON TESTS	E .	٠ a	2		POISON'S	E	1	2221.	1140		1	1142	.1062	≱180 .	0990	.0627				
POISSOWS RATIO BY TENSION TESTS		<u>.</u>			STRAIN	(IN /IN.)	1	5500.	1900:		-	.0032	9900:	.0107	.0149	.0159				
SOWS RATI		FILA. ORIENT.	906		STRAIN	(IN /IN.)	1	.000404	.000682		1	990000	.000704	028000	000984	966000				
1		-		-	STRESS	(igg)	0	10	15.6		0	£0	20	30	Q.	42.2				,
TABLE AIII 44		RESIN CONT.	36.9%		LOAD	('.BS.)	0	798	1560		0	1000	2000	3000	4000	4220				
F=		PANEL	S/N16	-	AREA	(SQ. IN.)	7860.				0010								•	
		-	97		THICK	C.W.	67.0				080									
	DATE: 11-14-88 MATERIAL IDENTIFICATION:		FICATION:			(IN.)	1.250				1.248									
			TEST		RT				ят											
	DATE:	MATERI			SPEC		S/N16 - 4				S/N18 - 5									1